An Address

ON

INVESTIGATIONS OF THE MOTOR FUNCTIONS OF THE ALIMENTARY CANAL BY MEANS OF THE X RAYS.

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BY

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WHEN I received the honour of an invitation to address this Division, I thought that I could not do better than fall in with the suggestion of your Secretary that I should deal with the progress in our knowledge of the motor functions of the alimentary canal in health and disease which has resulted from the use of the *x* rays.

The Oesophagus.

In the act of swallowing the food can be seen to pass with great rapidity to the back of the pharynx and thence equally quickly down the oesophagus. When it reaches the cardiac orifice its rapid progress is arrested owing to the sudden diminution in lumen, with the result that it runs slowly into the stomach and its upper limit has time to become horizontal. The interval which elapses between the commencement of the deglutition act and the disappearance of the last trace of food from the oesophagus varies between four and nine seconds in different individuals, half of the total period being occupied in reaching the lower end of the oesophagus, the other half in the passage through the cardia.

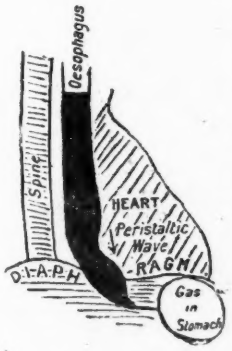


Fig. 1.—Epithelioma of the extreme cardiac end of the oesophagus (1 in. below the diaphragm), showing accumulation of bismuth-containing food in the dilated oesophagus above the obstruction and peristaltic waves attempting to overcome the obstruction.

When for any reason oesophageal obstruction is present, the exact point at which the passage of food is obstructed can be determined and the degree of stenosis estimated; as a rule, more or less dilatation occurs above the stricture, and in some cases strong peristaltic waves can be seen attempting to overcome the obstruction (Fig. 1). Oesophageal pouches can sometimes be discovered with the *x* rays, even if other methods have failed to indicate the cause of the symptoms from which the patient suffers.

The Stomach.

Our knowledge of the anatomy and physiology of the stomach has been completely revolutionized as a result of investigation with the *x* rays. It is now known that the old conception of the stomach as a flaccid bag lying horizontally high up in the abdomen is completely wrong. The *fundus*, which lies beneath the left dome of the diaphragm and always contains gas, passes into the *body* of the stomach at the level of the cardiac orifice. In the vertical position the body is of nearly uniform width and is situated entirely to the left of the middle line. It is either vertical or inclines slightly towards the right, and is separated from the *pyloric part* of the stomach by the *incisura angularis* on the lesser curvature (Fig. 2). The pyloric part of the stomach consists of the *pyloric vestibule*, which is directed upwards as it passes to the right of the middle line, and the *pyloric canal*, which is about an inch in length, and passes backwards, upwards, and to the right, its termination projecting into the duodenum. As a result of the tonic contraction of the sphincter which surrounds the pyloric canal, the latter is normally empty, even when the rest of the stomach is full.

In the vertical position the greater curvature almost invariably reaches below the umbilicus. In the horizontal position the greater curvature rises one or two inches, and comes to lie above the umbilicus (Fig. 3); at the same time

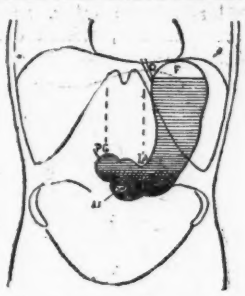


Fig. 2.—Normal stomach in the vertical position.

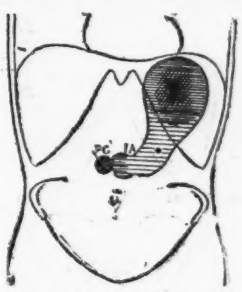


Fig. 3.—Normal stomach in the horizontal position.

O, End of oesophagus containing gas; I A, incisura angularis; P C, pyloric canal; F, fundus of the stomach; U, umbilicus.

the diaphragm ascends slightly, and the fundus rises with it. The lowest part of the stomach can be lifted between two and four inches by voluntary contraction of the abdominal muscles, and it can be caused to drop by their voluntary relaxation.

The stomach always contains gas, all of which collects in the fundus in the vertical position. After a meal the horizontal upper limit of the gastric contents can be clearly seen, most of the fundus being still full of gas; on shaking the body, the splashing of the fluid or semi-fluid gastric contents can be watched, and on leaning to one side the horizontal upper limit can be seen to be maintained. In the empty condition only the pear-shaped upper third of the stomach contains gas, the rest of the organ passing to the pylorus in the form of a collapsed tube, which corresponds in position to the lesser curvature of the full stomach.

From what has already been said it is clear that percussion of the stomach, whether empty or full, can only give information as to the area occupied by the gas it contains, and this bears no sort of proportion to the size of the organ. Although it is possible by means of auscultatory percussion to mark out a very definite area, which was formerly believed to be that occupied by the stomach, the *x* rays have proved that in reality it yields an even less accurate representation of the stomach than simple percussion.[1]

Investigations with the *x* rays have also shown how impossible it is for anybody to interpret the meaning of his symptoms correctly. Thus I have seen numerous patients, including several medical men, in whom an *x* ray examination in the vertical position showed that no excess of gas was present, although they complained of a sense of fullness in the stomach, which they were convinced was due to flatulence, and which they were constantly endeavouring to relieve by eructation.[2]

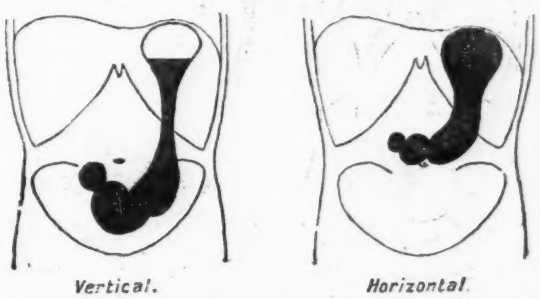


Fig. 4.—Ptosis of an otherwise normal stomach, disappearing in the horizontal position.

With the *x* rays any abnormality in the position and shape of the stomach can be readily observed. By no other means can gastroptosis be invariably diagnosed with certainty, for in many cases in which the stomach is quite normal in position when the patient lies down, as he does for ordinary abdominal examination, it drops to a remarkably low level as soon as he stands up (Fig. 4). I have

been much struck by the fact that severe gastroptosis is not uncommon in individuals whose abdominal muscles are well developed, and whose other viscera do not appear to drop excessively when the erect posture is assumed. Hour-glass stomachs can be readily recognized with the *x* rays, but it is important to remember that various conditions, some of which I shall allude to later, may produce a functional hour-glass constriction, which can generally be distinguished from the organic form by the fact that in the latter the neck does not pass from the most dependent part of the upper segment (Fig. 5). The presence of adhesions leading to fixation or deformity of some part of the stomach can be recognized with the *x* rays; but, unfortunately, they do not often give much assistance in the really early diagnosis of cancer.

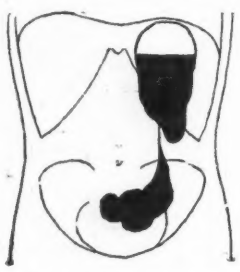


Fig. 5. — Organic hour-glass stomach, due to cicatrization of a gastric ulcer.

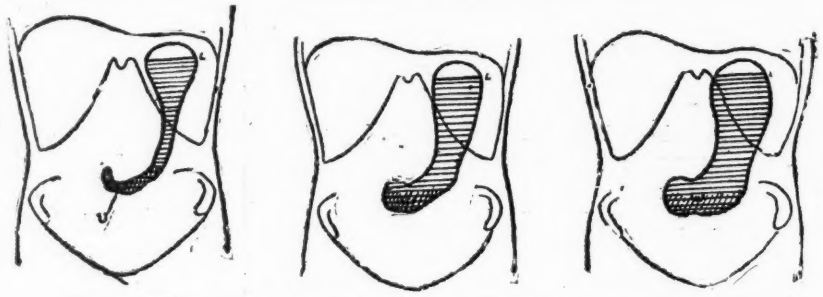


Fig. 6.—Filling of the normal stomach. U, Umbilicus; L, upper limit of gastric contents.

The tone of the stomach can be very satisfactorily investigated by means of the *x* rays. Owing to its adaptation to the bulk of the gastric contents, there is very little difference in the upper limit of the latter, whether their volume be 40 or 400 c.cm., and the greater curvature is very little depressed as the stomach is gradually filled (Fig. 6). When atony is present, this adaptation no longer occurs, and the food drops into the most dependent part of the stomach, so that its upper limit may even be below the umbilicus instead of between 1 and 2 in. below the diaphragm; as more food is taken, the greater curvature sinks more and more deeply and the upper level of the contents only rises to a comparatively small extent (Fig. 7). In the extreme degrees of dilatation, which occur in cases of long-standing pyloric obstruction, the dilatation may be so great that none of the food taken at an ordinary meal ever reaches the pyloric end of the stomach so long as the patient is in the erect position (Fig. 8). When ptosis is present in addition to atony, the

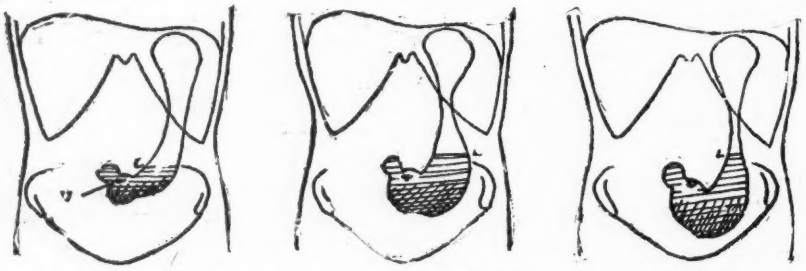


Fig. 7.—Filling of the atonic stomach. U, Umbilicus; L, upper limit of gastric contents.

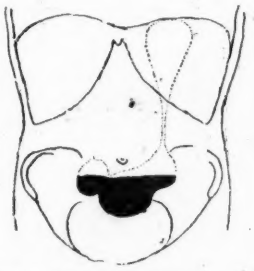
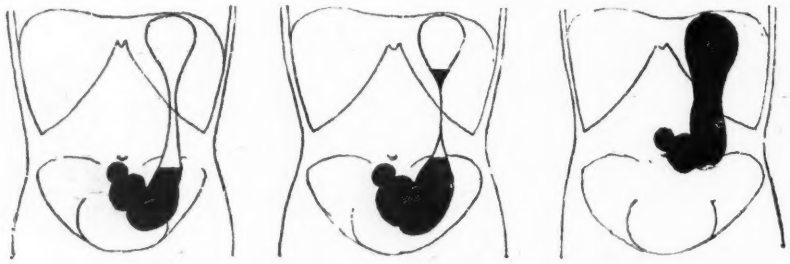


Fig. 8.—Pyloric obstruction due to duodenal ulcer; dilatation and hypertrophy of stomach

When the tone of the stomach is excessive, its greater curvature does not reach the umbilicus in the vertical position and in extreme cases the organ lies very obliquely immediately below the liver. The most common cause of hypertonus is duodenal ulcer (Fig. 10); in a somewhat considerable experience I have invariably found a hypertonic stomach in this condition unless the ulcer had led to organic obstruction. This is of great practical importance, as it assists in the differential diagnosis between duodenal and gastric ulcer, as hypertonus is rarely found in the latter condition. Moreover, when hypertonus is present in duodenal ulcer, the prospects of cure by medical means are generally good, whereas the slightest degree of dilatation indicates that a gastro-enterostomy is essential in order to overcome the obstruction. Hypertonus occurs in some cases of gall-bladder disease and of chronic appendicitis, and it may also result from a course of strict dieting in a patient who has been kept in bed. Spasm near the centre of the stomach can occasionally be observed, particularly in cases of gastric ulcer; it gives rise to a condition of temporary hour-glass stomach (Fig. 11).



A B C

Fig. 9.—Orthostatic hour-glass stomach. A, Vertical position, first stage. B, Vertical position, second stage. C, Horizontal position.

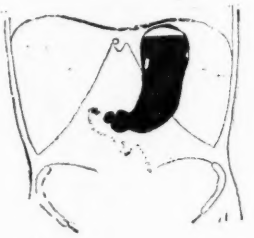
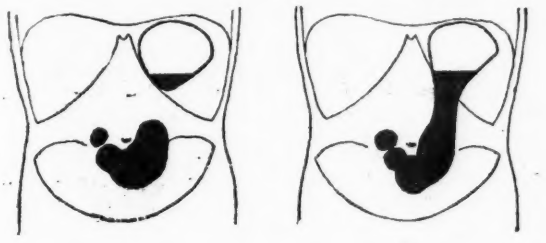


Fig. 10.—Hypertonic stomach due to duodenal ulcer.

The activity of peristalsis can be readily determined with the *x* rays, and the complete independence of peristalsis and tone has only been recognized since this method of examination was introduced. Thus normal peristalsis is frequently observed in atonic and dilated stomachs, and

in rare cases peristalsis may be deficient in hypertonic stomachs. In organic pyloric obstruction increased peristalsis can often be observed before it is visible through the abdominal wall, and instead of commencing in the middle of the greater curvature it can be seen to start near the fundus and to produce a complete separation of the contents of the pyloric end from those of the rest of the stomach at a point considerably more distant from the pyloric canal than is normally the case. I have only once



A B

Fig. 11.—Spasmodic hour-glass stomach with no ulceration. A, Spasm present. B, Spasm disappeared after vigorous contraction of abdominal muscles.

seen antiperistalsis in the stomach; when present it is a conclusive sign of organic obstruction.

The rate of evacuation of the stomach can be estimated with the *x* rays if care is taken that nothing is eaten or drunk until every trace of the shadow of the bismuth meal has disappeared. The *x* rays have shown that the stomach begins to empty itself immediately food enters it, and the evacuation continues without intermission until it is complete.

The Small Intestine.

Indications of the rapid passage of chyme through the small intestine can be observed with the *x* rays, and under favourable circumstances segmentation, which mixes the food with the intestinal juices and promotes absorption of the products of digestion without causing any forward movements of the intestinal contents as a whole, can be watched (Fig. 12). The bismuth-containing chyme is most concentrated in the duodenum before it has become mixed with the bile, pancreatic juice and succus entericus; the position of the duodenum can therefore frequently be determined. I have never observed true stasis in the duodenum, except in cases of organic obstruction, and to a less extent in extreme gastroptosis, in which a kink may occur at the point where the duodenum becomes fixed. I am convinced that kinking of the duodenum plays no part whatever in the etiology of duodenal ulcer, as has recently been suggested, for nothing could be less likely to cause kinking than the hypertonic condition of the stomach present in duodenal ulcer; the latter is, indeed, invariably associated with an unusually rapid passage of the chyme into the more distal parts of the small intestine. The tonic contraction of the ileo-cæcal sphincter leads to a slight delay at the end of the ileum, comparable to that which occurs at the lower

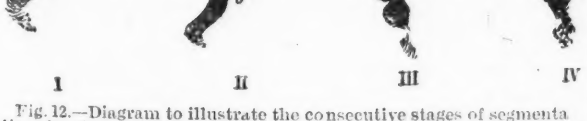
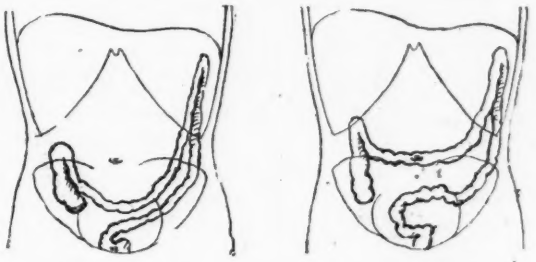


Fig. 12.—Diagram to illustrate the consecutive stages of segmentation in the human small intestine. Corresponding points are marked with the same letter.

end of the œsophagus. Consequently segmentation can be more easily observed in the last few inches of the ileum than in any other part of the small intestine. In a few cases I have seen a true kink near the end of the ileum, which has led to more or less obstruction, but in every instance this has been due to adhesions caused by an antecedent attack of appendicitis. I do not believe that a kink in the ileum is of any importance in the etiology of simple constipation, as a delay of more than a few hours is never observed in the end of the ileum, and this is merely an exaggeration of the normal delay caused by the ileo-cæcal sphincter.

The Colon.

Like the stomach, the colon undergoes considerable alterations in its situation according to whether the horizontal or the vertical position is assumed (Fig. 13).



A B

Fig. 13.—Influence of posture on position of colon in a normal individual A, Vertical position. B, Horizontal position.

The only fixed point is the splenic flexure, the hepatic flexure frequently dropping an inch or more when the individual stands up. The cæcum varies greatly in position; it is not very rare to find it in the true pelvis in perfectly healthy individuals, who have never suffered

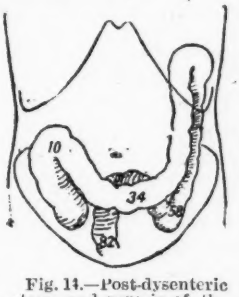


Fig. 14.—Post-dysenteric atony and paresis of the colon. Compare this lumen of the colon and the slow passage of faeces through it with Fig. 16.

Fig. 15. — Constipation with muco-membranous colitis, showing spasm of descending and iliac colon.

from constipation. Both the splenic and the hepatic flexures often appear to be extremely acute even in normal individuals; but the appearance with the *x* rays is somewhat deceptive, as the transverse colon is on a more anterior plane than the ascending and descending colon. By manipulation of the abdomen during a screen examination it should be possible to separate from each other the limbs of the hepatic flexure and of the splenic flexure; if this cannot be done, it may be assumed that the limbs are bound together by adhesions. Similarly, if it is impossible to move the shadow of the iliac colon by manipulating the left iliac fossa, it is probable that pericolitis is present, and in some cases of chronic appendicitis the cæcum is also found to be abnormally fixed.

The lumen of the transverse and descending colon is very much less than that of the cæcum and ascending colon, but in atony, due to such conditions as chronic dysentery, the lumen of the whole colon may be uniformly enlarged (Fig. 14). On the other hand, in spastic constipation, which is associated with the passage of membranes in the condition known as muco-membranous colitis, various segments of the colon may be seen to be abnormally contracted (Fig. 15).

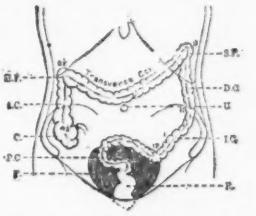


Fig. 16.—Diagram of normal large intestine, the pelvic colon being represented in the position it occupies when full. The numbers represent the hours after a bismuth breakfast at which the different parts of the colon are reached. C, Cæcum; A C, ascending colon; H F, hepatic flexure; S F, splenic flexure; D C, descending colon; I C, iliac colon; P C, pelvic colon; R, rectum; U, umbilicus; P, pelvis.

The rate of the passage of faeces through the large intestines can be estimated with the *x* rays. The cæcum is normally reached in a

little over four hours after the bismuth meal, the hepatic flexure two hours later, the splenic flexure three hours after the hepatic flexure, and the beginning of the pelvic colon twelve hours after the commencement of the meal (Fig. 16).

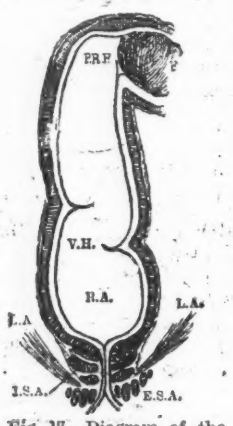


Fig. 17.—Diagram of the pelvi-rectal flexure, rectum, and anal canal. P R F, Pelvi-rectal flexure; V H, lowest valve of Houston; R A, rectal ampulla; L A, levator ani; I S A, internal sphincter ani; E S A, external sphincter ani; F, faeces in pelvic colon.

Under normal conditions the faeces do not pass beyond the sharp pelvi-rectal flexure until immediately before defaecation, but accumulate from below upwards in the pelvic colon (Fig. 17). Investigations carried out with the *x* rays four years ago demonstrated that in defaecation active peristalsis of the whole of the colon occurs, and under normal conditions everything beyond the splenic flexure is evacuated (Fig. 18).

CONSTIPATION.

My *x* ray investigations have shown that it is possible to separate all cases of constipation into two main groups.[3] In *intestinal constipation* a delay occurs in the passage through the colon, especially in its distal half, but defaecation is normal (Fig. 19). In *dyschezia*, on the other hand, the passage through the intestines as far as the pelvic colon is normal, but defaecation is inefficiently performed, and the rectum and pelvic colon are never properly emptied (Fig. 20).

Treatment.

The mode of action of different forms of treatment can often be studied by means of the *x* rays. Thus the stimulating influence of food taken into the stomach on intestinal peristalsis can be recognized (Fig. 21), and the effect of a suitable diet in the treatment of intestinal constipation can be watched (Fig. 22). The *x* rays afford a very valuable means of investigating the pharmacology of aperients and other drugs which influence the motor functions of the alimentary canal; as this method of research is still in its infancy I shall not discuss it more fully at the present moment.[4] The position of the colon and the situation of delay in cases of intestinal constipation vary so greatly that an *x* ray examination is often of great value for the information it gives as to the place where massage can be most usefully applied.

Although the relief of the abdominal discomfort and circulatory symptoms of visceroptosis obtained by the use of a suitable abdominal support is very striking, it is interesting to observe with the *x* rays that the position of the dropped stomach and colon are often unaffected (Fig. 23). Prolonged rest in bed with the foot of the bed raised has been shown by the *x* rays to result in a permanent improvement in the position of the stomach and colon in many cases of severe ptosis.

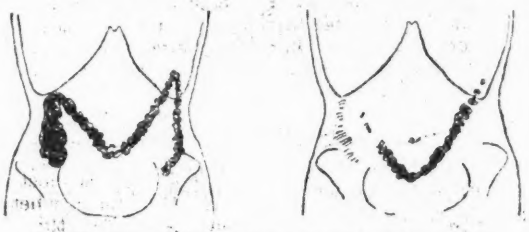


Fig. 18.—Normal defaecation; showing active participation of the whole colon and complete evacuation of everything above the splenic flexure.

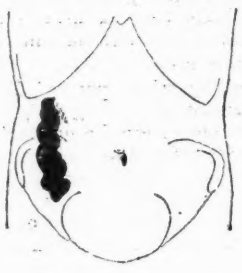


Fig. 19.—Intestinal constipation: 24 hours after bismuth meal. Subsequent examinations showed that a similar delay occurred along the whole of the large intestine.

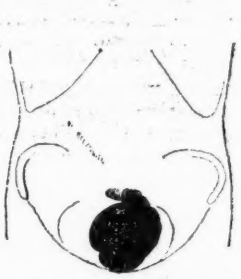


Fig. 20.—Dyschezia: 24 hours after bismuth breakfast. The patient felt no desire to defaecate.

An *x*-ray examination is not infrequently useful for its mental effect on the patient, as it may remove the fear of cancer or obstruction which is so common in nervous individuals suffering from constipation. In some cases, moreover, it may help to dispel the fixed idea held by perfectly healthy people that unless they take an enormous quantity of aperients they will never get their bowels

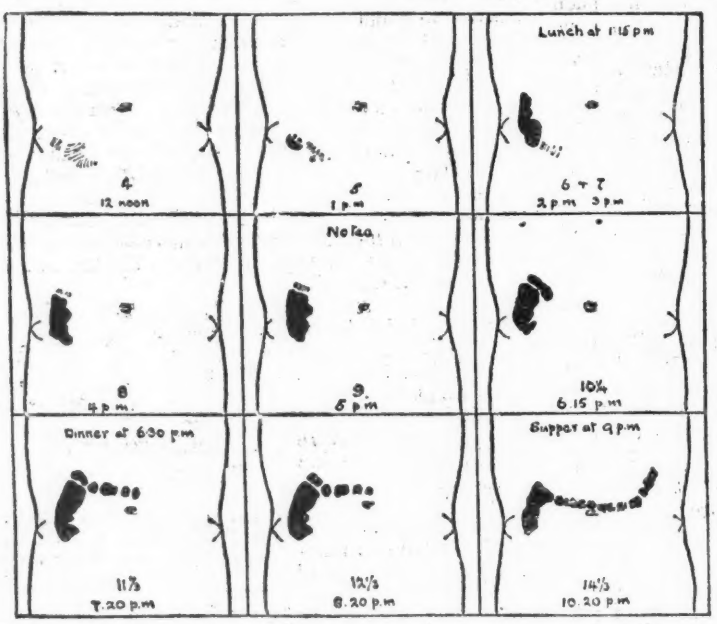


Fig. 21.—Hourly tracings to show effect of meals on the movements of the colon.

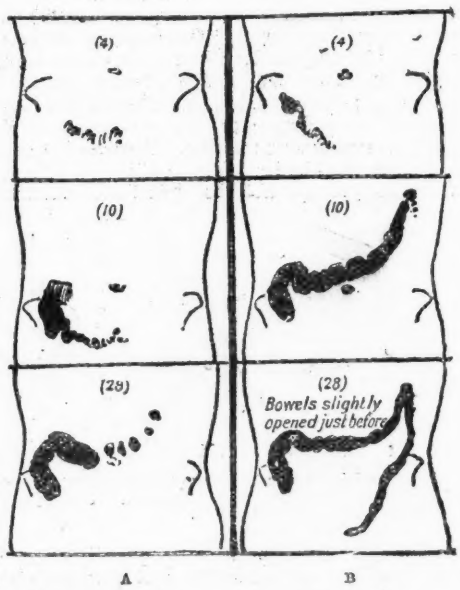


Fig. 22.—A, Non-stimulating diet, leading to constipation. B, After five days of stimulating diet (porridge, green vegetables, fruit, etc.).

open. Thus, having found by means of the *x* rays that a young man who had been in the habit of taking large doses of vegetable and saline purgatives every day was really not constipated at all when he was taking no medicine, I was able to persuade him on two consecutive mornings to open his bowels without artificial help, after demonstrating to him that the faeces had passed through his intestines, and were simply waiting in his rectum to be expelled.

The results of operation on the alimentary canal can be investigated with the *x* rays. My observations have convinced me that gastro-enterostomy is always a drainage operation, and that in successful cases most of the food leaves the stomach through the stoma whether pyloric obstruction is present or not. For this reason the anastomosis should always be made in the pyloric end of the stomach even if the ulcer is near the cardiac orifice. When the operation is unsuccessful it is generally due to the alteration which occurs in the relative position of the parts concerned when the vertical position is assumed; this is least marked with a hypertonic stomach, a fact which explains the rarity of vomiting and other unpleasant symptoms after the operation in cases of duodenal ulcer. I have now seen a number of patients on whom a gastro-enterostomy had been performed for various reasons, who, though cured of their original complaint, were much troubled during and immediately after meals by a feeling of fullness just above the umbilicus,

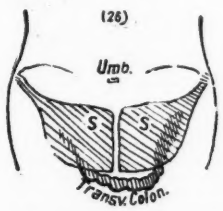


Fig. 23. — Failure of abdominal support to keep transverse colon, which had dropped into the true pelvis, in normal position in the erect posture.

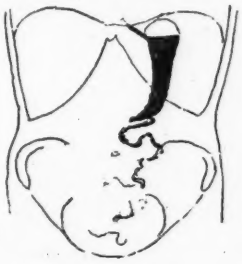


Fig. 24.—Five years after gastro-enterostomy for small duodenal ulcer which did not produce obstruction.

and who in some cases also suffered from diarrhoea after taking food. In these cases the food runs with such rapidity out of the stomach into the jejunum that none accumulates in the former, but the latter is overdistended; this overdistension is doubtless the cause of the discomfort (Fig. 24). Relief is obtained if the patient eats with extreme slowness, especially if the ordinary meals are replaced by smaller and more frequent ones; at the same time the diarrhoea can generally be controlled by the administration of a preparation of pancreatic ferments, which helps digestion in the intestine to compensate for the absence of digestion in the stomach, and also to a certain extent makes good the deficiency of pancreatic juice which results from the absence of the normal stimuli to its secretion.

I have covered such an extensive field in these remarks that I have only been able to give some slight indication of the most important results which have followed the employment of the *x* rays as a method of investigating the physiology and pathology of the alimentary canal. But I hope I have succeeded in awakening your interest in this fascinating subject, and showing you what great advances have already been made in our knowledge in the five years which have elapsed since Rieder showed that it was possible to apply the methods previously used by Cannon on cats to human physiology and pathology.

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[1] BRITISH MEDICAL JOURNAL, March 14th, 1911. [2] Goulstonian Lectures on *Sensibility of the Alimentary Canal in Health and Disease*, Oxford, 1911. [3] *Constipation and Allied Intestinal Disorders*, Oxford, 1909. [4] *Guy's Hospital Reports*, lxiii, 297, 1909.

THE authorities of the United States navy have followed the example of the army by making antityphoid inoculation compulsory in the case of all officers and enlisted men under the age of 45. Henceforward all recruits enlisted will have to submit to vaccination against typhoid fever as they now do against small-pox.

THE IMPORTANCE OF PELVIC DEPOSITS IN THE DIAGNOSIS OF ABDOMINAL CANCER.

BY

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IN a certain proportion of cases of carcinoma in the upper abdomen, portions of the growth find their way into the general peritoneal cavity, and then into the pelvis, where they become implanted and grow, in many cases giving rise to a mass easily palpable per rectum. Whether the particles simply gravitate to the pelvis, or arrive there as the result of the natural drainage of peritoneal fluid assisted by intestinal movements, or are carried in some other way, is of no moment for my present purpose.

The masses are to be felt in the recto-vesical pouch or pouch of Douglas, on the anterior wall of the bowel, within three or four inches of the anus. They may be single or multiple, and are either detected as a definite fixed nodule or nodules or as an infiltration. As a rule they feel about the size of a small hazel nut, though they may be much larger. In my cases the presence of the deposits has not given rise to any symptoms whatever, and they have only been discovered in the course of routine examination. Cases, however, have been recorded[1] in which the growth apparently originated in the rectum. Should this question arise, the matter could readily be cleared up by sigmoidoscopic examination, for with deposits of growth on the pelvic peritoneum the mucous membrane is not involved.

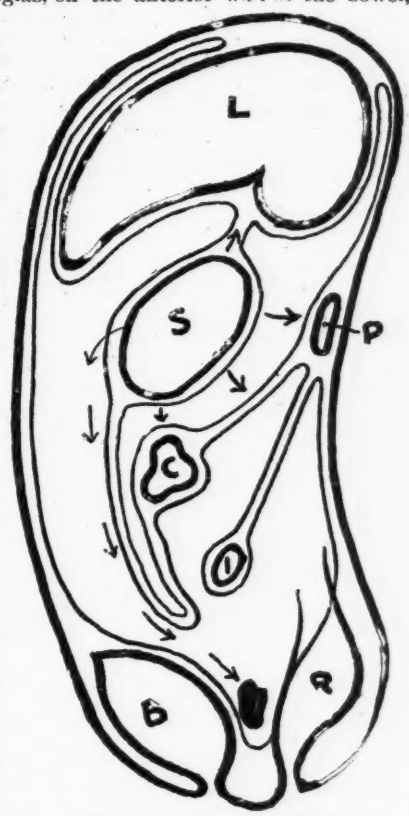

Fig. 1.—Represents diagrammatically a vertical section of the peritoneal cavity. The arrows show the directions in which a stomach growth may spread. The mass in the recto-vesical pouch is a peritoneal deposit of growth.

I wish particularly to emphasize that in cases of malignant disease in the upper abdomen, and especially with stomach cancer, while there may be no signs of dissemination to be made out on ordinary abdominal examination and no ascites, *there may be quite a considerable deposit in the pelvis, easily recognizable on rectal examination and without any symptoms to point to its presence.*

The first case which came before my notice was mentioned by me in an address delivered before a meeting of the British Medical Association at Sunderland[2] on April 3rd, 1906, as follows:

The Importance of Rectal Examination.

In my hospital work nothing has struck me more than the neglect of this method, for seldom a month passes without my seeing cases of serious rectal mischief that have been overlooked or wrongly interpreted for the want of proper local examination. It is indispensable in a complete examination of the peritoneal cavity, for it is only by this route in the male that the recto-vesical pouch can be properly explored. I am familiar with no better instance of its value in this connexion than the circumstances of the following case.

In May, 1900, Loreta's operation was performed for pyloric stenosis at another hospital. In October, 1900, the patient was admitted to the Newcastle Infirmary, where pylorectomy for cancer was carried out by Mr. Morison. In June, 1903, the man returned to the hospital for the removal of a tiny recurrence in the scar. Once again, in July, 1904, the patient applied for relief, suffering from a mass of growth in the abdominal scar. He was otherwise in good health, was able to work as a labourer, and had no stomach or bowel symptoms. It was arranged to remove the growth, but, as part of a regular routine, the zealous house-surgeon examined the rectum only to discover a large mass of growth in the recto-vesical pouch. Operative interference was, of course, hopeless; the patient was saved the pain and inconvenience of a useless operation, and the surgeon spared the chagrin of performing one. The patient sank and died in November, 1904, without developing any signs of obstruction.

Again, in a paper before the Blyth Division of the British Medical Association, March 6th, 1908, on "What can be done for Cancer of the Stomach,"[3] I drew attention to the matter as follows:

Recognition of Hopeless Cases.

Now, cases in which the abdomen contains fluid are usually beyond surgical aid, for it means involvement of the peritoneum by growth. But there are many in which there is extensive peritoneal involvement and yet no fluid, and, in a fair proportion of these, deposits can be felt in the pouch of Douglas. This sign has often been a great help to me, not only for the purpose of diagnosis, but because it shows that the patient's lease of life is rapidly running out and that a radical operation can scarcely be of any avail.

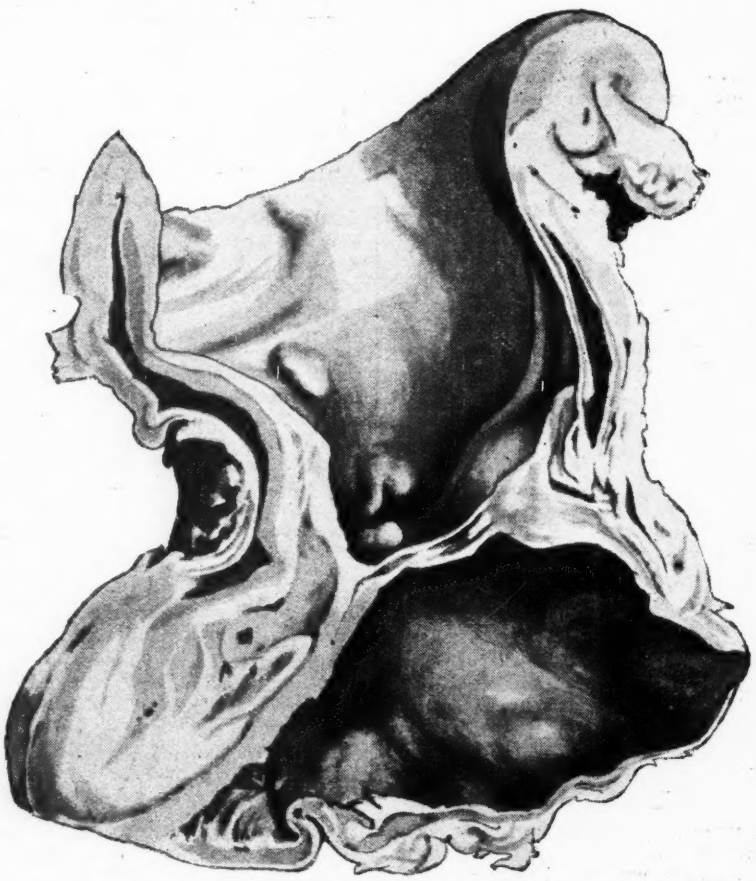

Fig. 2.—Drawing of the parts from the case of M. P. described in the text. It represents a vertical section of the pelvic peritoneum, and shows deposits of growth in the recto-vesical pouch. They were easily felt from the rectum as hard, fixed nodules.

Fig. 3 [Fig. 1 in present article] shows roughly the peritoneal cavity in vertical section, with the directions in which a malignant stomach growth may spread indicated by the arrows. Once the epithelium of the growth has burst through the overlying peritoneum it is spread by the influence of gravity, intestinal movements, and the conduction of the fluid which its growth produces. As many of these patients go about in the early stages the particles gravitate into the pelvis, where, without causing any symptoms whatever, they give rise to other deposits, which may form quite a large mass easily felt by the finger in the rectum or vagina.

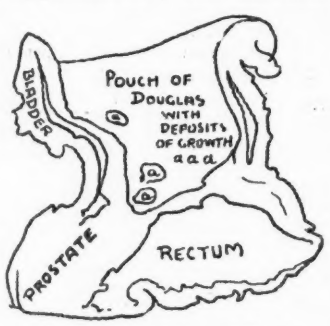

Diagram explanatory of Fig. 2.

For instance, in a recent case, a man of 51 was sent up to me for operation. He had been ill for four months, and, owing to frequent vomiting, had become wretchedly thin and ill. There was a large, freely movable mass in the situation of the pylorus. When the patient lay on the left side the tumour moved over to that part of the abdomen, and vice versa. Except for the wretched general condition it was apparently an excellent case for radical operation, as there were no signs of dissemination whatever, but, on rectal examination, some hard nodular masses could easily be felt on the pelvic peritoneum. I performed gastro-enterostomy, and, at the operation, the local stomach conditions were found to be very well suited for a secondary gastrectomy, but the pelvic deposits which I had previously felt were abundantly verified on exploring the pelvis with the hand.

Sometimes the pelvic deposit is the first thing to suggest a diagnosis of stomach cancer, as in the following case:

A lady of 43 was sent to me as a probable case of malignant uterus. On making an examination the uterus appeared to be normal, but there was a definite hard mass in the pouch of Douglas. On going into her history I found there had been much indigestion with vomiting, and she subsequently turned out to have stomach cancer with secondary peritoneal deposits.

Of course, it must be distinctly understood that this sign is of no negative value whatever, for the peritoneum may be studded with small deposits which it is quite impossible to feel on rectal or vaginal examination; and, further, care must be taken not to be misled by an old inflammatory mass in the pelvis, or by faeces in a prolapsed pelvic colon.

Since then I have frequently observed this sign, and its recognition has been of the greatest service, as the following illustrative cases will show:

CASE I.

M. P., a man aged 45, was admitted to hospital with a history of indigestion of five months' duration. He had pain about an hour after each meal, with frequent vomiting and loss of flesh and strength. When seen he was emaciated, and there was a large movable, nodular mass in the situation of the pylorus, but with no evidence of gross dilatation of the stomach. There were no other masses in the belly, no free fluid, no enlargement of the liver, and no big glands above the left clavicle, but on rectal examination a hard mass was easily felt in the recto-vesical pouch. The patient died suddenly after gastro-enterostomy, and at the necropsy deposits were found in the pelvis as shown in the illustration (Fig. 2). The primary growth was large, and the omentum and peritoneum were invaded, but there were no deposits in the liver.

CASE II.

In January, 1910, I was asked to see a woman, aged 38, who had suffered from indigestion from May, 1909. She saw her own doctor in September of that year, and was better after treatment. By December the symptoms recurred and she was seen by a physician, who sent her to bed. Soon after this a lump was discovered in the epigastrium, and I was asked to see the patient with regard to its nature. The lump would do very well for a growth at the pylorus, but it was only on rectal examination that the discovery of a hard mass at once clenched the diagnosis and showed how far the growth had insidiously progressed. I performed gastro-enterostomy in January, 1910, which gave me the opportunity of confirming the findings, but the patient soon sank and died four months later.

CASE III.

The most recent case was that of a man, aged 68, who was admitted to hospital in November, 1910, with a gall-stone history of twenty years' duration. At the operation the common duct was very large and full of stones, while the gall bladder, which was removed, was shrivelled and very thick-walled. On microscopic examination it showed evidences of a slow-growing carcinoma. In November, 1911, this patient was readmitted, looking better than before but complaining of pain and discomfort after meals, accompanied by vomiting. On examination a large hard mass was felt adherent to the centre of the scar. There were no other masses, no evidence of enlargement of the liver, and no ascites; but on rectal examination a firm, hard, fixed mass was at once felt on the right side, with several smaller fixed nodules to the left. It was decided to open the abdomen with the object of relieving the obstructive vomiting from which the patient suffered. It was

then found that the hypochondriac mass originated in the gall-bladder area and directly involved the duodenum, while there were many peritoneal deposits which were thickly crowded in the pelvis.

Cases like these show the absolute need of routine rectal examination, and are eloquent testimony to the very valuable evidence that may be so gained.

I have no personal statistics as to the proportion of cases in which this sign is present, but Dudley W. Palmer[4] has investigated a consecutive series, and I quote from his paper as follows:

In the 435 case histories were 307 cases of carcinoma of the stomach, the remainder being of the intestine, pancreas, liver, and gall bladder. In this number 28 (or 6½ per cent.) showed secondary deposits on the rectal shelf or in the cul-de-sac of Douglas. No secondary deposits were to be palpated through the abdomen, and, with two exceptions, abdominal fluid was clinically questionable or absent.

The discovery of such pelvic deposits may not only establish the diagnosis of malignant disease, but may at the same time be the earliest clinical sign of inoperability, so far as radical measures are concerned.

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FURTHER EXAMPLES ILLUSTRATING CASES OF CHRONIC TOXAEMIAS AT VITTEL.

BY

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IN July, 1910,[1] I was able to bring forward a series of typical cases from my practice at Vittel during the previous season (1909). That paper led to a number of inquiries from many medical brethren, most of whom asked for more. Some varieties of chronic toxaemias were not represented, and I have tried in the present notes to, in part, fill up these gaps.

In practice at such a place one finds a large number of cases of a nondescript character, or at least appearing to be so to our imperfect knowledge or our insufficient means of determining in detail the loss of physiological balance or, in other words, the disease, which makes them appear to us as an unco-ordinated group of symptoms. Such indefinable cases represent a large part of one's practice; they do the cure, get relief of their symptoms, and go on their way contented. I do not feel justified in quoting such cases, as they would rather tend to confuse our minds than to push our observations and deductions onward along the path of precise knowledge.

I have therefore limited these new examples of cases, with one exception, to definite morbid entities, to illustrate one or the other ailment that is dignified by a name and presumed to be of known pathology. Like those of the first series, their treatment is based fundamentally upon two principles, which may be defined as:

(1) The use of a vehicular water.
(2) The compensatory relief of the usual work to the kidneys, allowing them to do an equivalent of new work.

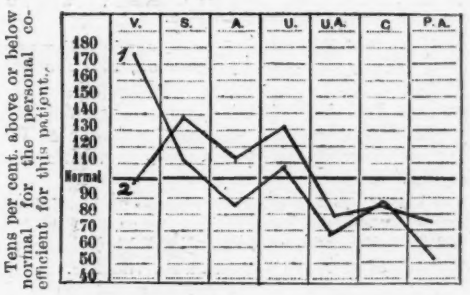
1. The first is the employment of a natural saline solution, just suitable, a little hypotonic to the blood, characterized physiologically by rapid assimilation, and, if the supply is kept up, by equally rapid excretion. So intense is the affinity of the blood for this water that when large quantities are being drunk a tendency to constipation is produced, showing that the blood is even stealing it from the food bolus, and also showing, not infrequently, marked thirst for more by patients drinking considerable quantities daily.

2. The second fundamental principle is compensatory relief of the kidneys. If a given horse can draw a load of two tons of coal, that horse will not be able to draw an additional ton of potatoes. If we take off a ton of coals, we can then replace that amount by a ton of potatoes. This principle is the one we follow in utilizing a non-chloride-bearing water, such as Vittel. If by a suitable diet we reduce the diurnal amount of sodium chloride, which we will put at 12 grams, to a practically accessible amount of 6 grams, we give our cellular structures a chance of giving up to the partly demineralized blood serum their store of uric acid and other toxic substances. At the same time our kidneys have a reserve energy for excreting their uric acid and other toxic substances to the equivalent of the diminished 6 grams of sodium chloride. This analogy will, I hope, make clear the mechanism of the lixiviating effects of such a mineral water as Vittel.

CASE I.

Mrs. C., aged 49. Blood pressure 140 mm.; capillary reflux 3; pulse 58; weight 72.200 kilos. When young had lung trouble, but has been gouty for three or four years, which, she says, is markedly hereditary. Last Christmas, after exercise, had dark water and a little pain, followed by rigors and giddiness, and finally renal colic. Shortly afterwards the stones dropped into the bladder under the influence of Vittel "Grande Source," which had been ordered her. In a few days she passed two small uric acid stones.

She is a "good eater," but temperate in alcohol; her digestion is good, excepting for a little flatulence; has been constipated for some time, and has a thoroughly inactive skin. She has a fair sleep, but is a great dreamer, and has a bad mouth in the morning.



CASE I.—Mrs. C. August 13th, 1910: Specific gravity 1015. Faint traces of biliary pigments, indican, and scatol. Purins 0.842. Extremely numerous pavement cells, some leucocytes, and very small crystals of uric acid. September 5th, 1910: Specific gravity 1027.5. Faint traces of true bile pigments, indican, and scatol. Purins 0.251. No deposits. V, Volume; S, solids; A, acidity; U, urea; UA, uric acid; C, chlorides; PA, phosphoric acid.

She came to Vittel feeling generally "down" or "seedy." The first urine analysis portrays the reason of this, as well as some remaining catarrh of the urinary passages. The urea-uric acid ratio is much disturbed. In addition to six glasses of "Source Salée" in the morning, and three of "Grande Source" in the afternoon, she had massage under water every fourth day, and daily general massage with Peleiba iodine jelly. The unpleasant feeling soon disappeared. At the end of the cure all the elements of the urine are raised in quantity, showing that both nutrition and elimination have been improved. Blood pressure fell to 125 mm.; weight had fallen to 69.750 kilos, or a loss of 2.450 kilos (5½ lb.).

I have given this case as one where the principal symptoms indicate that they were due to water starvation, with resulting toxaemia and deposition of uric acid in joints and urinary passages and fat in the tissues. Outside this, I think we can argue very little from the analyses, and this is a good example of clinical success but speculative failure.

CASE II.

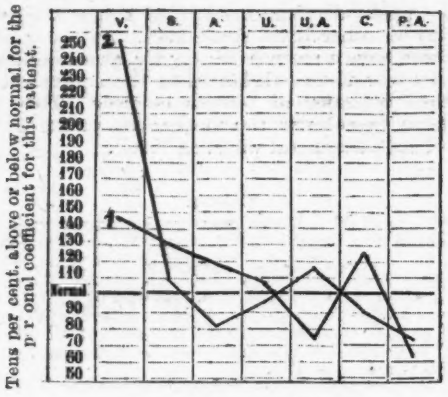
Dr. H., aged 48. Blood pressure 135; capillary reflux 2½; pulse 60; weight 64.650 kilos. Has always suffered from irritability of the bowels, with constipation and occasional diarrhoea. Spasmodic colls and mucous diarrhoea very slight. His digestion is good, he does not suffer from headaches, but always dreams. He is obviously neurotic.

He came to Vittel because he suffers from tendinous fibrosis, which attacks any group of muscles that are put to any new or special use. He exhibits large nodes on tendon sheaths at wrist, etc.

The first urine analysis shows an excess of solids due to too much chlorides, acidity a little raised, urea normal, but marked retention of uric acid, so that the ratio of urea to uric acid is much disturbed with imperfect phosphatic assimilation.

He was ordered a relatively low chloride bearing diet, as free as possible from rich, xantho-uric-bearing foods, six glasses of "Source Salée" every morning, and three glasses of "Grande, Source" in the afternoon, every alternate day a vapour bath and massage under water, to be followed by a rub down with Vigorax. Unfortunately, he was unable to afford but a little over a fortnight for the cure, notwithstanding which he declared

himself as feeling much better, and the nodules on the tendon sheaths at the wrist had much diminished. The second analysis, made while still drinking the water, shows a much greater approach to normal, a great rise in the elimination of



CASE II.—Dr. H. August 1st, 1910: Specific gravity 1018. Traces of biliary pigments. Indican fairly marked. Purins 0.528. Numerous pavement cells and some sodium urate. August 15th, 1910: Specific gravity 1009. Sodium urate, a few leucocytes, and epithelial cells. Purins 0.328. V, Volume; S, solids; A, acidity; U, urea; U A, uric acid; C, chlorides; P A, phosphoric acid.

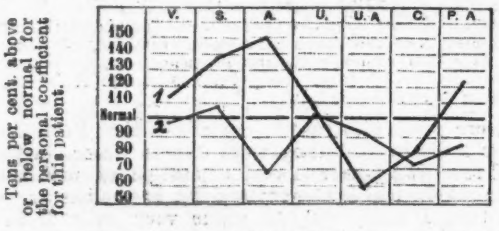
uric acid, so that the ratio of urea to uric acid was restored, and even slightly temporarily reversed, and the phosphates were rising.

This case had been treated by all sorts of imaginable drugs with little good, yet the improvement at Vittel was striking, considering the short time in which it could be carried out.

I take this to be a case of toxaemia of rheumatic facies, probably of intestinal origin, that, were one able to carefully study the intestinal flora, might be definitely classed, and perhaps even treated by an auto-vaccine.

CASE III.

Major M. C., aged 42. Blood pressure 135 mm.; capillary reflux 4; pulse 70; weight 115.100 kilos; height 6 ft. 4 in.; is a big, powerful man. In 1902, in South Africa, had bad headaches, which continued till 1905, when albuminuria was detected. The following winter went to Egypt, and most of the summers since has gone to Contrexéville. He never had scarlet fever, but typhoid as a child, and also malaria. His father died of Bright's disease. He was put on vegetarian diet when his albumen was first discovered. His digestion is good; he now eats fish and chicken, and when abroad veal. He is a heavy smoker (pipe). His headaches are relieved by aspirin, and he takes Hunyadi for his constipation. Has had acute gout in toe.



CASE III.—Major C. August 13th, 1910: Specific gravity 1023. Albumen 2.08 grams per twenty-four hours. Traces of true and modified biliary pigments. Purins 0.696. Large uric acid crystals, some cells, large oxalate of lime crystals very abundant, and some granular cylinders. August 31st, 1910: Specific gravity 1022. Albumen 1.155 grams per twenty-four hours. Purins 0.789. Sodium urate very abundant; a few large crystals of uric acid in macles and rosettes, a few pure epithelial cells. No oxalates or casts. V, Volume; S, solids: A, acidity; U, urea; U A, uric acid; C, chlorides; P A, phosphoric acid.

The urine analysis made before the cure shows marked oxaluria, granular cylinders, and 2.08 grams of albumen in the twenty-four hours. The patient wished to be reduced in weight, and the following was therefore the dietary ordered: "Avoid raw and cooked fats, greasy dishes, fried articles, salt and salted foods, pastry and farinaceous food, sweets, gravies, sweetbread, liver, kidneys, rhubarb, sorrel, spinach, asparagus, vinegar, etc." This would hardly be considered an ideal diet for an albuminuric patient, as he was reduced to rather a highly nitrogenous diet, with some vegetables and fruit. Nevertheless his blood pressure fell to 120 mm. Hg; his capillary reflux from 4 to 3½, his pulse ranging from 66 to 70. His weight steadily fell to 111 kilos—that is, a loss of 4.100 kilos, or 9 lb., in eighteen days. Simultaneously his daily output of albumen was about half of that on his arrival. He took alternately daily a warm immersion bath for twenty minutes at 36° C. and a massage under water at 42° C. He felt much better. The marked acidity of the urine had become negative; the urea to uric acid ratio was restored.

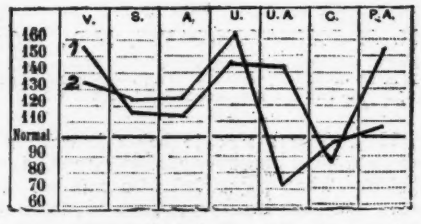
At the height of his cure he was drinking seven glasses (half-pints or 300 c.cm.) of Grande Source before breakfast, which represents, amongst its other constituents, a considerable amount of lime salts, and yet his oxaluria and cylindruria had disappeared.

I have chosen this case as a type of one of the low-tensioned toxaemia albuminuric, and above all to illustrate how unfounded are Dr. Benjamin Moore's conclusions as to the injurious effects of calcareous waters in oxaluria. You will remark that this is a renal case without much hypertension, though no indications of any heart lesion could be found. I think we can interpret this case as one of imperfect metabolism and damaged renal structure which, by suitable lixiviation with a non-chloride bearing water, is soon restored to approximate normal, and might be so entirely if we physicians were not so often subjected to such curtailment of the time given to the cure by the patients themselves.

CASE IV.

Mr. H. N., aged 55. Blood pressure 290 mm.; capillary reflux 3½; pulse 58; weight 67.700 kilos. Has suffered from albuminuria for years, neuralgias, lumbago, and from time to time oxaluria and much uric acid sand. Is a temperate man, both in food and drink; somewhat sedentary. He had been a patient of mine before, and had been warned to limit his salt food, which will explain the low quantity of this in his urine analysis. The only immediate complaint he had was bilateral nasal neuralgia.

The first urine analysis, the day before the commencement of the cure, shows excessive assimilation, though the urea to uric acid ratio is normal; his chlorides are low from intentional



CASE IV.—Mr. H. N. July 27th, 1910: Specific gravity 1018. Albumen 1.80 grams per twenty-four hours. True biliary pigment; slight, but urobilin rather abundant, as also indican and scatol. Purins 0.802. Some rosettes of bicalcic phosphate, sodium urate, some crystals of uric acid, some leucocytes and epithelial cells. August 15th, 1910: Specific gravity 1022. Albumen 0.425 grams per twenty-four hours. Traces of reducible matters and of true biliary pigments. Indican and scatol marked. Purins 0.540. Some urates, uric acid, and a few leucocytes. V, Volume; S, solids; A, acidity; U, urea; U A, uric acid; C, chlorides; P A, phosphoric acid.

chloride starvation, and some phosphaturia is present. Biliary pigments and indican and scatol are much in excess.

As he was obviously the type of hypertension of renal origin, his blood pressure was frequently noted during the cure.

The following are the records:

July 25th. Blood pressure 290 mm.; capillary reflux 3½, pulse 58.
July 30th. Blood pressure 240 mm.; capillary reflux 3½, pulse 58.
August 5th. Blood pressure 245 mm.; capillary reflux 3½, pulse 58.
August 10th. Blood pressure 240 mm.; capillary reflux 3½, pulse 58.
August 14th. Blood pressure 215 mm.; capillary reflux 3, pulse 62.

This is a striking example of what can be done in reducing blood pressure in a hypertensionist of renal origin. Simultaneously with this his albumen fell from 1.80 grams per diem to 0.425 gram, or less than a quarter of what it was.

Curiously his urea has somewhat augmented, but there has been a tremendously lixiviating effect on the uric acid, while the phosphaturia has disappeared. What the kidney lesion may be is doubtful. I have notes that in 1909 he had some cylindroids and kidney cells in the urine, but in 1910 we could find no trace of either.

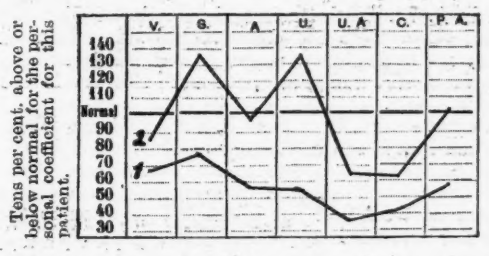
I have just seen the patient (April, 1911). His blood pressure has risen in part—245 mm., and also his pulse, 76—but he walked quickly uphill to my villa just after lunch.

CASE V.

Rev. J. W. R., aged 68. Blood pressure 165 mm.; capillary reflux 3; pulse 80; weight 83.580 kilos. Had psoriasis some years since. Has had nasal catarrh for many years, and lately bad rheumatism in arms and back. Last August had bronchitis.

Is a moderate eater, his digestion is fairly good, but he has suffered from dyspepsia, for which he got much advantage from Burroughs, Wellcome and Co.'s laxative tabloids and ½ grain of calomel weekly. Has been a golfer for twenty years. He gets dripping wet from perspiration before the ninth hole is reached, and used to remain soaked till he changed for dinner. Three weeks since had a bad blow over liver from a motor car.

On his arrival he was markedly depressed and neurasthenic, said he was no longer able to do his work, talked of retiring, and was much troubled in consequence; doubted whether any cure could save him, etc., was too obese. The first urine analysis showed a very fair ratio between the different normal elements, though all were very much below the average. What, however, was unsatisfactory was the presence of 10.35 grams of glucose per diem.



CASE V.—Rev. J. W. R. August 13th, 1910: Specific gravity 1024.5. Glucose 10.35 grams per twenty-four hours. True biliary pigments sensible. Indican and scatol marked. Purins 0.391. Numerous crystals of uric acid in rosettes and isolated, some leucocytes. August 22nd, 1910: Glucose 3.10 grams per litre after a meal. September 1st, 1910: Specific gravity 1028. Glucose *nil*. Faint traces of indican and scatol. Purins 0.319. Large and small crystals of uric acid. Very rare leucocytes. V, Volume; S, solids; A, acidity; U, urea; UA, uric acid; C, chlorides; PA, phosphoric acid.

His diet was suitably modified, and he soon worked up to nine dasses per diem of "Source Salée." He had a massage under water every other day at 42° C., followed by a rub down with Vigorax.

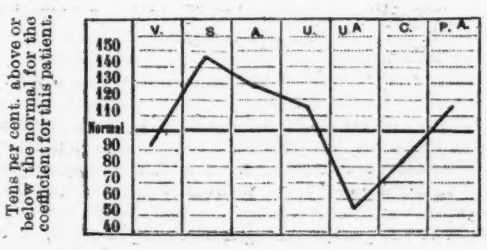
Eight days later he felt much better, and we found 3.10 grams of glucose per litre.

On September 1st he felt quite fit to return to work. His blood pressure had fallen to 145 mm., with same capillary reflux and pulse. He had lost 3,280 kilos in weight, or over 7 lb. An analysis showed a marked improvement with a rise of all the elements. This is specially remarkable for the urea and phosphates, though the uric acid was still in part retained, especially as his diet was naturally rich in nitrogen. The chlorides insufficiency is due to privation in his diet. His glucose had fallen to less than a third in the twenty-four hours (3.10 grams).

This is a good example of glycosuria, neurasthenia, obesity, and visceral goutiness—four forms of toxaemia with some hypertension, all cleared up in a cure of less than three weeks at Vittel.

CASE VI.

Mr. T., aged 22. Blood pressure 145 mm.; capillary reflux 4; pulse 68; weight 64.100 kilos. An otherwise healthy young university man, has suffered from intense seborrhoea capitis for sixteen years, and for a long time a lichenoid growth extending out on the groins and some inches down the thighs and on to the buttocks. He has usually a very dry skin, excellent digestion, is a moderate eater, temperate, hardly smokes, and has his bowels regular.



CASE VI.—Mr. T. August 23rd, 1910: Specific gravity 1029. Traces of albumen and glucose. True biliary pigments sensible and traces of the modified, also traces of indican. Oxalate of lime in great abundance, but small. Uric acid crystals. Purins 0.352. V, Volume; S, solids; A, acidity; U, urea; UA, uric acid; C, chlorides; PA, phosphoric acid.

The urine analysis shows a marked disturbed ratio urea to uric acid, intense oxaluria, traces of albumen and sugar, some biliary pigments, and traces of indican.

He was ordered Pelciba brilliantine for the head and Pelciba antiseptic nearly pure on the skin lesions. At the end of about ten days, when he was called away, both the scalp and the groins were nearly well, and later a letter from him says that he was practically cured excepting for some brown stains on the site of the lichenoid eruption. He had continued the treatment by drinking Vittel water at home. A year later reports perfect health.

I might continue to cite a large number of other similar examples, or some almost miraculous cures, but these latter are always open to the accusation of *post hoc propter hoc*. What, however, is interesting is that a not inconsiderable number of cases drift here independent of medical advice and often contrary to it, and get better. Another section is formed by those sent by their medical advisers as a last resource in diagnostic and therapeutic despair. In nine-tenths of such cases a sentiment of gratitude and respect is engendered towards their medical advisers, which clinches the tie between patient and physician for the future.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, 1910, ii, p. 190.

An Address
ON
IODINE AS THE SOLE DRESSING FOR OPERATION WOUNDS.

DELIVERED AT A MEETING OF THE STAFFORDSHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION,

BY

REGINALD ALCOCK, M.B., F.R.C.S.EDIN.,

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MEDICAL opinion concerning the utility of iodine as an agent in the production of asepsis has oscillated between contemptuous neglect and unqualified praise. At the present time its virtues are recognized on every hand, and its exceptional usefulness as a skin sterilizant needs no further emphasis, but reliance on its extended efficacy as the sole dressing to be applied to the operation wound from the date of the operation to the discharge of the case, is, I venture to think, a new departure.

This paper is based on the successful results of 31 cases treated by such a method, which, shorn of details, may be summed up as the treatment of the operation area by tincture of iodine, applied at intervals for the first few days, the incision being left exposed to the air, and only covered by the patient's night clothes.

My acquaintance with the use of iodine as the sole dressing for operation wounds dates back to thirty years ago, when I first remember seeing the practice of my father, who, besides being a hospital surgeon, was also public vaccinator, and it is vividly impressed on my mind that when the children came to have their arms inspected on the week following the vaccination, each arm which showed any signs of redness was painted over with a strong solution of iodine, and simply allowed to dry. This was invariably successful in preventing any spread of the cellulitis.

The first time I noticed iodine being used for the preparation and preservation of catgut was in America in 1907, whilst I saw it used for the sterilization of the skin of the abdomen in the gynaecological clinic in Vienna in 1908, and this method I adopted on my return.

Last year, immediately after my visit to the Annual Meeting of the British Medical Association in Birmingham to hear the discussion on the technique of wound treatment, it occurred to me, Why use dressings except iodine to operation wounds, and what is their use? and the more I thought of it the less reason I could see for them in suitable cases, on which account I at once proceeded to put the idea into practice, and I think that my results have fairly justified their absence.

Looking through the literature relating to the sterilization of the skin, I have been struck with the fact that special stress is laid upon the difficulty experienced in rendering the deeper layers of the skin sterile, and especially with the fact that any moisture of the skin means the detection of bacteria, where previously they were absent, if attempts had previously been made to discover them on a dry skin.

Although this stress is laid upon the action of moisture in macerating the epidermis and letting free the various micro-organisms, in no case does one find any special attention paid to the hair follicles, sweat and sebaceous

glands, as possibly being the most important home of these microbes. Norman Walker, in his book on dermatology, says:

> While the sebaceous gland opens with a distinct mouth, either on the surface or into a hair follicle, the sweat duct terminates in the germinal layer. From this point a channel may be traced between the cells of the epidermis, where the sweat communicates freely with the interepithelial lymph, and the duct appears in the well-known corkscrew form in the horny layer.

These so-called sweat or coil glands, according to Unna, are not only concerned with the excretion of a watery fluid, but also in the lumina is a considerable amount of fat; and the fact that the palm of the hand, where, if anywhere, perfect lubrication of the skin is required, contains no other glands but the coil glands is a strong piece of clinical evidence bearing on the character of their excretion.

That these sweat glands play an important part in giving a resting place for these microbes probably explains the difficulty experienced in sterilizing the hands, as the palm of the hand contains no other glands except these sweat glands winding intricately through the epidermis.

What Mr. Leedham-Green tells us about the position of the microbes on the skin is also of interest. He says that we may expect to find them wherever fine molecular dirt can penetrate, but not deeper than that, and that we meet them not only on the surface of the cuticle, but between the cells of the superficial layers of the epidermis and in the entrance to the sweat glands, sebaceous ducts, and hair follicles. Haegler says that they do not penetrate deeply anywhere, either between the cells or in the sweat and sebaceous ducts. Further, Mr. Leedham-Green observes that hands with a soft, smooth skin and short, well-kept nails were cleaned with far greater ease than where the skin was rough or covered with coarse hairs and large sebaceous follicles.

From this it seems to me a very fair inference that the most important part played in infection is the sweat glands, and this is especially borne out by the fact that it is difficult to discover micro-organisms on a dry hand, whilst the more the hands are moistened by washing the more infected do the hands become; from this it is reasonable to assume that the more a part sweats the more micro-organisms are brought to the surface.

As the skin is dotted over with innumerable little holes it is not presumptuous to think that the microbes would more deeply penetrate between the layers of the skin by means of these channels, which offer little or no resistance, rather than through the more difficult path, namely, our first line of defence, the epithelial layers of the skin.

It was from a consideration of these points that I was first inclined to adopt the method of open treatment of wounds by simply painting them over with a solution of tincture of iodine.

In the North Staffordshire Infirmary we have two preparations of iodine in use—the one for ligatures consists of 1 part of *B. P.* tincture with 15 parts of 60 per cent. alcohol, and the other for application to the skin and wounds consists of 2 per cent. of iodine with 90 per cent. industrial methylated spirit.

This industrial methylated spirit has been used for some little time, and has proved perfectly satisfactory, and from a hospital economical point of view it is of great advantage, as it costs only 2s. a gallon as compared with the 26s. a gallon paid for rectified spirit. It contains only 5 per cent. of impurities in the form of wood-naphtha, as compared with the 10 to 15 per cent. of impurities in ordinary methylated spirit. It also has the great advantage that it does not cause any smarting of the eyes or other unpleasant effects.

The effect of the application of iodine to the skin is, first of all, destruction of the microbes of the surface, and, for a very short distance, by its penetrative powers, of those embedded in the very superficial layers of the skin. Probably as equally important an effect is the locking-up of the micro-organisms in the sweat glands by its hardening action on the skin and the simultaneous contraction of the mouths of the glands.

Haegler noted that the microbes do not penetrate deeply anywhere, either between the cells, or in the sweat or sebaceous glands, but I would suggest (and it is on this suggestion that I base my treatment) that their penetration is deeper in the sweat glands than in the layers of the skin.

Mr. Leedham-Green has proved by experiments that the hardening of the skin, when produced by iodine, is gradually lost in the presence of blood or albuminous fluid.

In the same way if one paints iodine on the palm of the hand where sweat is abundant, and covers it up with a dressing, the hand soon has a softer appearance than normal, showing that the water and lubricating fat of the sweat has the same destructive effect on the skin hardened by the iodine.

Mr. J. M. Graham has shown that iodine penetrates more deeply into the pores of the skin when there has been no preliminary washing, and the freer the skin is from moisture and grease, the more efficient is the action of the iodine.

Objection to the use of iodine has been made on the ground that it causes eczema in children and old people, but the usual experience is that it only causes this phenomenon when the iodine dressing has been covered with gauze or wool, and not when left exposed to the atmosphere, unless it is applied very frequently.

Asepticity of the skin is probably impossible of attainment, but it is quite possible to inhibit the growth of bacteria until the wound itself has become sufficiently resistant.

When I thought of the great part which the sweat glands, in my opinion, played in the infection of a wound, I felt that, on theoretical grounds, there was a very great objection to dressings in any form, for, if a patient has the least tendency to sweat, the most likely place for it to happen is on that part of the body which is covered with gauze, wool, and a well-supporting bandage, for here are set free the microbes which have not been destroyed, but only locked up for a short period in these skin-penetrating sweat glands. Accepting this, it naturally follows that a sterile dressing with moisture from the sweat glands, *plus* albuminous fluid in the serum oozing from the wound, may be regarded as a very good medium for the growth of bacteria, and therefore one is forced to the conclusion that an aseptic dressing is harmful, and that if any dressing is used at all it should be one containing an antiseptic to inhibit this bacterial growth.

Our aim in the treatment of a wound is to let it be hermetically sealed against the entrance of outside organisms by its own dried secreted serum, and then to render this sterile to growth of the bacteria, if they should escape from the infected sweat glands.

It has been frequently observed that a rise of temperature takes place on the second day after operation—sometimes called a traumatic rise of temperature. The wound is then often dressed, and swabbed over with an antiseptic, and the temperature falls to normal. On the sweat infection theory, the microbes have come from the glands or from infection by the surgeon, though of course in these days we should be able to exclude him, with his gloves, mask, and head covering.

If a wound is observed two days after operation, it is often seen to have raised and slightly inflamed edges, but, with an iodine dressing, the wound is seen to be flat with the surface, and no surrounding swelling or redness.

There is a great probability that tincture of iodine owes a great part of its therapeutic action to the hyperaemia it induces—like the Bier treatment—causing a phagocytosis or intracellular destruction of micro-organisms in the neighbourhood of the wound, as seen in cellulitis, erysipelas, etc., and also on account of the increased flow of blood to the part, causing a more rapid union of the cut edges.

The preparation of the patient in a set operation is carried out as follows: A bath is given on the night preceding the operation, and clean clothes are put on; in the morning the operation area is dry shaved, rubbed over with ether, and painted over with the solution of iodine; when this was dry, a sterile towel was laid on the skin in the first series of cases, but now this has been abandoned as unnecessary. The area is again painted over when the patient is on the table.

In emergency cases there is no preliminary washing, which would not only macerate the epidermis, but also open the pores of the skin; therefore the area is only

dry-shaved, rubbed over with ether, and iodine painted on, which serves to kill the bacteria on the surface and lock up the rest.

The following precautions are considered essential for success: Perfect asepsis is to be observed during the operation. All bleeding points are to be stopped, and the wound rendered quite dry. All abdominal and deep wounds are to be sewn up in layers; peritoneum, muscle fibres, sheaths, and skin to be united separately to give the necessary support. Care is to be especially taken in skin apposition.

No wet swabs are to be used, in order that the skin may be kept dry, and only that blood is to be cleared away which adheres either to a plain dry swab or is removed by the iodine-containing swab when applying it to the stitched-up wound.

Iodine is to be applied immediately after operation, and again three hours afterwards, to render sterile any serum or blood which may possibly have oozed out.

The wound is again painted over daily for the next three days only, except in cases involving wounds about the perineum or vulva, to which I shall refer later.

The patient is to be watched until completely recovered from the anaesthetic, and the hands are to be kept outside the bedclothes to see that there is no unconscious interference with the possibly irritating wound.

Sisters in charge of the cases say that it is quite remarkable that in none of the cases have the patients touched their wounds, either awake or asleep, and the chief objection is that they like to show their incisions to the visitors. Special mention is made of this, because it is the first criticism that will probably be made of the treatment, and whether the observations of the sisters be taken into consideration or not, all I can state is that if the patient has rubbed, or even scratched, his itching wound, no harm has resulted.

In the first series of cases, the custom was to lay a sterilized towel loosely on the wound after it had been painted, and before being sent out of the theatre, but now that has been discarded as unnecessary, and the patient's clean clothes are simply pulled into position.

In the first six cases the iodine was painted once a day on the wound for six days; but in a case of inguinal hernia there was a slight iodine rash, and so now it is only painted on for the first three days, and again on the removal of the stitches on the ninth day.

There are a few points in regard to the after-treatment in certain cases which it may be as well to mention.

In all abdominal cases and herniae it is customary to give a hypodermic injection of $\frac{1}{6}$ grain of morphine and $\frac{1}{150}$ grain of atropine, immediately after the operation to prevent vomiting.

In operations about the vulva, as in the removal of cysts, etc., and in perineorrhaphy, the legs are tied to the corners of the bed, to keep them wide apart, and prevent as much as possible any sweating, as the sweat glands in this region are so numerous; in addition, the wound is painted over with iodine every time after urine has been passed.

The method is, of course, only applicable to those cases in which the wound can be completely closed up, and can in no case be used where a drain of any kind is necessary. In all operations where support is afterwards necessary, it cannot be used, as in amputations, excisions, etc.

In abdominal operations the method has been perfectly successful, but if the abdomen has been opened, either by the gridiron incision or the incision in the course of the rectus, the wound has been stitched up in separate layers, and any strain of the muscles only tends to approximate the fibres and sheaths.

In some forms of umbilical and ventral herniae, where there is no muscular support, some kind of binder, such as a sterilized towel, might be necessary until all danger of vomiting had passed, when the part would be freshly painted with iodine.

In inguinal hernia no kind of support is needed, whether one is content with tying off the sac very high up, or whether the canal is opened and reunited, because, as pointed out by Moynihan, the muscles forming the walls of the canal are so arranged that in their contraction they act as inguinal sphincters.

Patients have the further advantage that they do not have the feeling of being trussed up, nor have they to learn to breathe without any movement of the abdomen, and this freedom appears to add very much to their comfort.

All the cases treated by this method have given excellent results, not even a stitch abscess having been observed.

I feel that this is a somewhat revolutionary practice in the treatment of wounds, after being used to the elaborate mass of sterilized gauze, wool, and Gamgee tissue which one has been in the habit of applying, and amongst my immediate friends the method was at first received very sceptically, dire consequences being prophesied. I am pleased to say that it is now being adopted by some of my colleagues with the same encouraging results.

In the annual reports of hospitals it is quite usual to draw attention to the increased cost of dressings, and if the method stands on no higher ground than that of economy, it will still serve some good purpose.

Up to date there are 31 cases, and, as the accompanying table is fairly explanatory, there is very little for me to comment on except to say that it shows that the method has a very wide field for application.

I should like to take this opportunity of tendering my thanks to my house-surgeon, Mr. Gilmore, for the great interest he has taken in the treatment, and also for compiling the table.

List of Cases Operated Upon to Date.

Name.	Age.	Date of Operation.	Case.	Iodine Treatment.	Discharged.
A. C.	44	Aug. 3	Perineorrhaphy	Iodine after micturition	Aug. 19.
W. D.	22	Aug. 9	Left varicocele	Daily 6 days	Aug. 22.
A. S.	25	Aug. 9	Right inguinal hernia	" "	Aug. 26.
A. P.	20	Aug. 9	Appendicitis	Daily; iodine rash	Aug. 26.
N. B.	35	Aug. 12	Papilloma of vulva	After micturition	Aug. 28.
N. E.	34	Aug. 12	Ruptured perineum	After micturition	Sept. 4.
H. T.	18	Aug. 16	Varicocele	Daily	Aug. 30.
G. A.	56	Aug. 18	Abdominal exploration	"	Aug. 30.
A. C.	18	Sept. 1	Left inguinal hernia	"	Sept. 16.
A. S.	39	Sept. 1	Carcinoma mesocolon	"	Sept. 17.
J. T.	48	Sept. 1	Strangulated right inguinal	Iodine 3 days	Sept. 17.
E. F.	17	Sept. 6	Right inguinal hernia	" "	Sept. 14.
J. E.	33	Sept. 6	Haemorrhoids	Iodine 4 days	Sept. 14.
J. P.	10	Sept. 18	Acute gangrenous appendix	Iodine 3 days	Oct. 2.
H. R.	68	Sept. 18	Strangulated inguinal hernia	" "	Oct. 7.
A. P.	29	Sept. 21	Left inguinal hernia	" "	Oct. 18.
S. L.	72	Sept. 21	Dermoid of ovary	" "	Oct. 10.
J. T.	24	Sept. 23	Ruptured perineum	Iodine 5 days	Oct. 12.
A. F.	45	Sept. 23	Lipoma of back	Iodine 3 days	Oct. 4.
A. W.	23	Oct. 11	Appendicitis	" "	Oct. 28.
A. F.	35	Oct. 12	Ventrifixation of uterus	Iodine 4 days	Nov. 2.
J. H.	59	Oct. 12	Right hydrocele	Iodine 3 days	Oct. 27.
W. M.	63	Oct. 25	Right inguinal hernia	" "	Nov. 9.
D. M.	33	Nov. 3	Fibromyoma of uterus	" "	In hospital.
J. B.	46	Nov. 3	Strangulated femoral hernia	" "	Died Nov. 5.
E. W.	31	Nov. 4	Varicose veins	" "	Nov. 22.
G. C.	30	Nov. 4	Left inguinal hernia	" "	Nov. 20.
R. C.	38	Nov. 4	Left inguinal hernia	" "	Nov. 22.
A. T.	20	Nov. 15	Twisted dermoid of ovary	" "	Nov. 20.
H. C.	32	Nov. 16	Papillomatous ovarian cyst	" "	In hospital.
E. L.	67	Nov. 16	Complete procidentia with vesical calculi, transperitoneal cystotomy. 54 calculi removed. Ventrifixation of uterus	" "	In hospital.

THE German Surgical Society will hold its forty-first annual congress at Berlin in April (10th–13th) under the presidency of Professor Garré, of Bonn.

A Lecture

ON

A NEW MATERIAL (DURALUMIN) FOR SURGICAL APPLIANCES.

DELIVERED AT THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC,

BY E. MUIRHEAD LITTLE, F.R.C.S.,

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BY the term "surgical appliance" I understand all sorts of instruments of the surgeon's art which are applied to the patient's body in the treatment of deformity, disease, or injury.

Such appliances have been used as far back as the history of civilization takes us. Recent excavations in Egypt have revealed to us wooden splints still *in situ* on the mummified broken limb, and even the blood stains on the bandages have been preserved by the dry and sterile sand of the desert. In Italy many bronze appliances have been found, and artificial limbs, strengthened with plates of that metal. No doubt, iron was used in surgery very soon after its use in the arts was discovered, but, if so, oxidation has long ago removed all traces of the appliances which may have been made of that metal. The process of tempering steel was certainly known as early as the ninth century B.C., for Homer describes it, and an iron implement has been found imbedded in the pyramid of Kephron, in Egypt, which is probably as old as 3500 B.C.

I have already referred to the use of wood in ancient times in Egypt. This material remains the best material for many splints and for artificial limbs, but many other substances have been and are used for various purposes, such as leather, gutta-percha, celluloid, poroplastic felt, pasteboard, paraffin, glue, waterglass, and plaster-of-Paris, to mention some of them.

Iron and its properties are so familiar to us that we hardly realize what a remarkable metal it is. It is difficult to conceive our civilization without it. To take one of its properties only, its capability of being magnetized, how many of the modern applications of electricity would be possible without it?

Yet iron in a pure state unalloyed with other elements is a chemical curiosity. Carbon is the element with which it is commonly combined, and the various characteristics of wrought iron, steel, and cast iron depend upon the amount of carbon which they contain.

Steel, strictly speaking, is that form of iron which, containing more carbon than wrought iron and less carbon than cast iron, possesses the valuable property of becoming hard when, being heated to a red heat, it is suddenly cooled. The degree of this hardening depends on the temperature of the steel just before it is cooled, and this process of hardening is known as tempering. It is this property which has given to steel its great value in the arts, and this it is which makes it so useful for surgical appliances. "Mild steel" is really only a pure form of wrought iron incapable of being tempered.

Steel has held the field almost unchallenged for hundreds of years. The demand for offensive and defensive armour stimulated improvement in the production of the metal and in the skill of the craftsmen who made armour, until by the sixteenth century these latter knew pretty well all that was knowable of their business.

One armourer at least turned his attention to the making of orthopaedic appliances. Skatt (or Schacht?) of Utrecht, in the middle of the seventeenth century, won a European reputation and a large income by his treatment of deformities with steel "harness." In that delightful work, *The Memoirs of the Verney Family*, a good deal is to be found about him, a summary of which appeared in the BRITISH MEDICAL JOURNAL some years ago.[1]

An eighteenth century instance of the use of steel supports is to be seen in the last picture of Hogarth's series of *Marriage à la Mode*, in which the child wears "irons" on its legs. A famous inventor of instruments of the end of the eighteenth and the beginning of the nineteenth century was Robert Chessher, a surgeon who devised many appliances, and is referred to by Mrs. Taft in *Middlemarch*, Book V, chapter xlv, thus: "I remember Mr. Cheshire (*sic*), with his irons, trying to make people straight when the Almighty had made them crooked."

Chessher died an old man in 1832, when orthopaedic surgery scarcely existed, and it is since that time that the increased attention given to deformities has led to the production of many ingeniously devised and skilfully made instruments, some of which I had the honour of recommending to the notice of the Polyclinic in a lecture a year or two ago. Into the construction of nearly all these instruments steel enters largely, and leather is used as a covering and for the manufacture of surgical boots.

Despite the great advantages of steel, its strength, its adaptability, and its elasticity when used in the shape of springs, it has certain disadvantages, and of these the two chief are its weight and its liability to corrosion.

Weight.

Many of the cases in which instruments are needed are the results of anterior poliomyelitis. In such the wasted muscles often find themselves severely handicapped by the weight of the appliance which is necessary to enable the limb to be used advantageously. It becomes, therefore, a great object to save every ounce of weight that can be spared.

Corrosion.

Corrodibility becomes a drawback in practice only when the steel is exposed to the moisture of the body, and especially so when it is covered by padding, as those parts of an instrument which are in actual contact with the body necessarily must be. In that case not only is the steel rusted and weakened, but the oxide formed increases the corrosive effect of moisture on the leather and on the padding.

Thus, in a walking instrument the steel plate which is riveted between the inner and outer soles of the boot, and by which the uprights are attached to the boot, is very apt to perish and crack, being corroded as much by the perspiration which soaks through the inner sole as by external moisture. Still, steel has held its ground, although for a few appliances, such as flat-foot plates, aluminium bronze has been used. Although not so easily corroded, its specific gravity is as high as that of steel, for it consists of 90 per cent. copper and is much heavier for the same strength.

When the electrolytic method of preparing aluminium was discovered and that metal was first obtainable at a moderate price, hopes were entertained that it might be used for surgical appliances, and some were made of it, but although very light and not easily corroded it was found not to be stiff enough if pure, and when alloyed it was brittle.

DURALUMIN.

Thus matters remained till a year or so ago, when Messrs. Vickers, Ltd., put on the market a new alloy, which is called Duralumin, and was used in the construction of the naval air ship, which, through no fault of its material, was wrecked at Barrow.

This metal is an alloy of aluminium slightly heavier than that element. It has a specific gravity of 2.8, while aluminium is 2.7 and steel 8, so that it is rather more than one-third the weight of steel. Its strength, however, is about the same as that of mild steel of the same bulk. Like brass it can be made stiffer by hammering, and it is supplied in varying degrees of hardness, according to the purposes for which it is required.

It is practically non-corrodible, being scarcely affected by prolonged exposure to a concentrated solution of sodium chloride, ammonium sulphate in 10 per cent. solution, ammonia, sulphuric or nitric acids, sulphuretted hydrogen solution, or sea water. Caustic alkalis, however, attack it quickly.

Duralumin takes a high polish, which is scarcely dulled by prolonged exposure to the air, even to the air of London. It cannot be brazed, but it can be soldered; as soldering has an annealing effect on it, it is not often advisable to use solder. Nor can it be tempered like steel, but the hardening effect of hammering or rolling takes the place of tempering to some extent.

Having these qualities, duralumin seemed to me to be likely to be useful as a material for orthopaedic instruments, and I asked Mr. Albert Evans to procure some, and to experiment for me at the National Orthopaedic Hospital. The first appliance was supplied about six months ago; since then a number of instruments have been made and used, and have given me satisfaction.

Among those appliances which have been tested by actual and often rough wear, and of which specimens are now shown, are Thomas's hip and knee splints, double Thomas's splint for Pott's disease, spinal supports, walking instruments for paralysis and for severe flat-foot and flat-foot plates. It will be noticed how light they all are. One of these plates which I now show has been in use for some months during last summer and was necessarily exposed to a great deal of perspiration, yet, as is seen, the surface is not in the least corroded. The under surface of this plate, however, is roughened from friction against the sole of the shoe.

All of these instruments have been made for me by Mr. Albert Evans of Fitzroy Street, W. Their cost is the same as that of steel instruments of the same quality, so that hospital patients are able to profit by the good qualities of duralumin.

Duralumin might very well replace wood for many splints, especially for use in countries where white ants are found. It is easily shaped, and it has the advantage over wood that it can be sterilized by boiling without injury.

I have also found another important use for it in combination with gypsum for splints when an *x*-ray picture is wanted without removal of the splint. This often happens in the treatment of congenital dislocation of the hip-joint. An attempt at reduction is made, and the limb at once fixed in plaster-of-Paris while the patient is anaesthetized. If it is then desired to ascertain the exact position of the parts by *x* rays, it is found that without dangerously weakening the splint by cutting away plaster it is impossible to get a satisfactory picture.

By using a duralumin splint, or by merely applying plaster to the thigh and the upper part of the pelvis and connecting these separate segments by strips of sheet duralumin a perfectly firm appliance results, and as the *x* rays are able to penetrate the duralumin easily a good picture of the hip can be obtained. The *x*-ray prints which Mr. Stanley Melville, Radiographer to the Royal National Orthopaedic Hospital, who suggested this use of duralumin, has been kind enough to take for me show that the image is improved rather than the reverse when the rays have passed through a thin sheet of duralumin of No. 14 B.W.G.—that is, of about $\frac{1}{7}$ in. thickness.

It seems probable that a great sphere of usefulness lies before the alloys of aluminium, and no doubt further improvements will be made in them, and this metal, of which the supply is practically inexhaustible, will enter more and more into our daily life, although I will not go so far as an American authority, Professor Marion How of Columbia University, who has expressed the opinion that "at some remote day" (when iron has become scarce) "aluminium, or one of its alloys, may become the great structural material, and iron be used chiefly for those objects for which it is especially fitted, such as magnets, springs, and cutting tools."

REFERENCE.

[1] The Treatment of Spinal Curvature 250 Years Ago, BRITISH MEDICAL JOURNAL, 1903, vol. ii, p. 89.

THE German Balneological Congress will hold its thirty-third annual meeting at Berlin in March (7th–11th). The general secretary is Dr. Brock, Berlin, N.W. 52, Thomasiusstrasse, 24.

THE Berlin Society of Urology was formally instituted on January 16th. Professors Carl Posner and L. Casper were elected presidents; Professor Kutner, vice-president; Professor Rumpel, secretary; Dr. Mankiewicz, treasurer; and Dr. S. Jacoby, librarian.

THE President of Venezuela, we learn from our American contemporary *Science*, has issued a decree creating a National Bureau of Sanitation. Under its auspices will be inaugurated an Institute of Hygiene, which will be composed of a laboratory of bacteriology and of parasitology, a veterinary department, and a central station of disinfection. The staff of the bureau will be composed of a director, a subdirector, a bacteriologist, an engineer, a biologist, a veterinary surgeon, an inspector-general, two technical aids, a secretary, and two laboratory assistants.

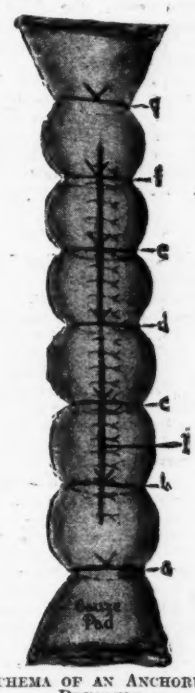
A NOTE ON THE VALUE OF ANCHORED DRESSINGS IN SURGERY.

By J. LYNN THOMAS, C.B., F.R.C.S.,

SURGEON TO KING EDWARD VII HOSPITAL, CARDIFF.

THE methods of keeping dressings on by means of bandages, strapping, and collodion, are neither satisfactory nor suitable in certain regions, because reliable protection from infection of the line of the operation wound is not guaranteed nor rendered approximately safe by such means.

In order to get over this difficulty in operations upon these regions, thus unfortunately handicapped in a surgical sense, namely, the perineum, the buttocks, and the upper-inner regions of the thigh, I began anchoring the dressings in the fashion indicated in this paper about eighteen months ago. For example, in a case of subcutaneous sarcomatous tumour involving the vulvo-vaginal region, with secondary growth extending downwards along the course of the gracilis, it was necessary, in the first place, to make a long antero-posterior incision close to the junction of the skin and the vulvar mucous membrane, and a second incision extending at a right angle from its centre downwards along the inner side of the thigh for about four inches. In this situation none of the ordinary methods of applying and keeping on dressings were either trustworthy or practicable. However, I found that a carefully planned anchoring of a T-shaped dressing to such a wound gave every satisfaction.



SCHEMA OF AN ANCHORED DRESSING.

The vertical line indicates the skin incision and its sutures: *a*, *b*, *c*, *d*, *e*, *f*, *g*, indicate the anchoring sutures of the gauze dressing. Note the relative positions of *a* and *g* to the ends of skin incision.

The experience gained by anchoring dressings to the surgically handicapped areas proved so welcome that I have for the last fifteen months extended the principle to other regions where any of the ordinary methods gives satisfaction, chiefly on account of its simplicity and efficacy and comfort to the patient. I have used the anchoring method for operations such as those upon the Gasserian ganglion, the face, in laminectomy, operations on the kidney, liver, and uterus, and in other abdominal operations.

I use neither bandages nor wool but confine the protection of the wound to the simple anchored dressings, with the addition of bismuth and xeroform paste to the skin incision, and of vaseline around the contact area of the skin, and gauze dressing. During the tropical heat of last summer such a dressing was very agreeable to patients.

The diagram, kindly made for me by my friend Dr. Owen Ll. Rhys, indicates clearly the method adopted, and the principle involved in the application of the dressing. In an operation for the radical cure of umbilical hernia, for example, in a very fat patient, the sutures of the anchored dressing are passed through the skin and adipose tissue right down to the fascial buried sutures, and are placed fairly close to each other in order that the dead space of the approximated surfaces of the subcutaneous fatty tissue may obtain positive pressure, and so prevent exudation of blood or serum, and also obviate the necessity of drainage. The general appearance of the dressing when finished resembles, according to a friend's opinion, that of a cracker.

ERYTHEMA AND DEATH FOLLOWING INTESTINAL CATARRH.

BY

P. BROOKE UNWIN, L.R.C.P., L.R.C.S. and ALFRED EDDOWES, M.D.

WE give a rather full account of the following case of erythema, as it has an important bearing on the discussion opened by Professor Sir William Osler at the annual meeting of the British Medical Association held at Birmingham last year.

During the patient's illness some of the severe symptoms had led to a suspicion of tuberculosis or cerebro-spinal meningitis, especially the latter.

A child, under 2 years of age, had been ill for six weeks in the hottest part of last summer. The illness commenced with green stools. Mucous casts of the bowels were passed, sometimes with blood. There had been vomiting, retraction of the neck, and unequal pupils. There was no tuberculous history. The child had been breast-fed. Both mother and father were living and well. The only other child was strong and well. Four weeks after the illness commenced a rash appeared. When seen by us together, thirty hours before death, the child was emaciated and unconscious. An icebag was being applied to the head; vomiting had ceased. The bowels acted without haemorrhage, but the child was evidently sinking.

There were numerous patches of erythema on the face, trunk, and limbs. On the face they were chiefly bullous; on the body and limbs (especially legs) they were more deeply situated and nodular. The largest patch felt like a group of gummata, and was situated on the inner aspect of the right thigh. A few patches were flat, and not unlike a chloral (drug) rash. Others again were like the well-known erythema nodosum.

Necropsy.

A *post-mortem* examination was made six hours after death, under difficulties of time, space, and accommodation.

Body emaciated, slight stasis discoloration on back. Sites of former erythema still marked by bluish or purple lumps, or denuded surfaces where bullae had existed—showing well how numerous the skin lesions had been and how symmetrically distributed. Fontanelles not closed. As soon as the skull was opened a large amount of clear fluid escaped. Convolutions very pale, and traversed by highly injected dark veins. One patch of discoloured and slightly roughened surface on left frontal lobe and in dura mater over it. A similar patch on left lobe of cerebellum. These patches were from 1 to 2 in. in diameter. No adhesions. On raising legs about a drachm of clear fluid escaped from the spinal cavity. No pus. No obviously lymph coagulation. Ventricles not dilated.

There was no peritonitis. Liver smooth, enlarged, pale yellow, and soft; on its lower anterior surface and posterior portion of under surface were several glassy-looking lines, as if cracks had been sealed up, suggesting a similar cause having been at work to that which produces the well-known linea alba in the stretched abdominal walls. The gall bladder contained between two and three drachms of bile. The spleen was apparently normal, colour dark red. The kidneys were apparently normal. The stomach and intestines were uniformly pale, and almost empty. No ulcer, adhesion, or stricture. The intestines had a slight doughy feel. Some enlarged mesenteric glands were removed for examination.

There was some injection of the base of the right lung; the lungs were otherwise normal. The heart muscle was very pale, otherwise heart and valves normal. There was no joint swelling, or oedema of limbs. A piece of skin was taken for microscopical examination from one of the largest patches of erythema. The following is the laboratory report:

The sections "from the skin show an extreme degree of dilatation of the vessels not immediately beneath the epidermis, but of those a little deeper in the cutis; the very large numbers of red corpuscles seen here are almost entirely intravascular, the condition being such as would be met with in acute erythema, but there is nothing to indicate its precise nature. Of the other sections, that of the lymphatic gland shows some large-celled hyperplasia, such as results from chronic inflammation, but there is no definite pathological change to be detected in the sections of the medulla or of the cerebellum."

THE German Orthopaedic Society will hold its eleventh congress this year at Berlin on April 9th, under the presidency of Dr. H. Gocht.

THE *Boston Medical and Surgical Journal* states that the United States Consul at Gothenburg, Sweden, reports that acute poliomyelitis prevailed in epidemic form in Jonkoping County last autumn. The total number of cases reported up to November 29th, 1911, was 870. The majority recovered, but it is estimated that of these some 200 have been left with permanent disability from paralysis.

A PRELIMINARY NOTE ON THE PENETRATING POWER OF SOME OINTMENT EXCIPIENTS.

BY F. GARDINER, M.D., F.R.C.S.E.,

ASSISTANT PHYSICIAN, SKIN DEPARTMENT, ROYAL INFIRMARY, EDINBURGH.

(From the Research Laboratory, Royal College of Physicians, Edinburgh.)

IT is quite time that the use of the various ointment excipients should be put on a scientific basis, as, although much valuable clinical work has been done, the results are not concise, and are mainly found in the form of favourite prescriptions handed down by authorities.

In 1906 Sutton[1] carried out some researches in Unna's clinic, but his results have not been followed up so far as I know. Wild[2] recently published an article on the official ointment bases, regarding them from the point of view of their protective, emollient, and absorbent characters, and as I have been carrying out a research on this subject for the past year, the results so far obtained seem to be of sufficient interest to warrant publication.

Guinea-pigs have been employed, and the parts of the back of the animal utilized have been denuded of hair; the animal was killed later by ether, and the parts which had been treated were excised and cut on a freezing microtome (CO_2). The use of paraffin, celloidin, or any fixing agent would of course have been detrimental, and the parts were accordingly cut fresh. Care had also to be taken to cut from within outwards, and avoid contamination from a stained knife.

With the excipients used a definite quantity of stain or iron salt was thoroughly incorporated, and the whole then rubbed into a part of the skin for a noted time. At first the animal was killed immediately, but in later experiments it was found to be better to leave the ointment on for an hour or so, protecting the parts by strips of plaster.

Of the stains used Scharlach R. gave best results, as it is freely miscible with fats and oils, and is readily recognized in the tissues. It was thought that iron salts would be valuable, as they could be precipitated in the tissues, but the Prussian blue test does not answer in organic combinations and the black precipitate got with ammonium sulphide is not distinct enough. The oleate of iron is better than the sulphate, as the latter does not dissolve in oils.

In the first experiments the hair was shaved off before inunction, and then the use of a depilatory powder was tried, but as both caused some irritation and appeared to prevent absorption, simple close clipping with scissors was adopted and found to give better results. Generally four areas were operated on in the same animal, so that the comparison was obtained whichever method was employed.

The sections were mounted at once in honey and glycerine and examined immediately, as it was found that they were rapidly spoiled by the stain gradually diffusing.

The composition of ungt. ophthalm. basic. is anhydrous wool fat, 6 drachms, and almond oil and distilled water, of each 1 drachm. The cold cream contains spermaceti, rose water, white wax, and almond oil, the exact proportions being kept secret by the firm who made it. Future experiments will be made with a definite formula.

So far the results show the superiority of olive oil and cedar oil among liquid excipients, the first being the better; goose grease is first among the more solid fats, and benzoated lard comes next.

Glycerine of starch with cold cream, glycerine of starch with hydrous lanolin, ungt. ophthalmicum basicum and cold cream are the best of the combinations, and are placed in order of merit.

In conclusion it is well to mention that the experiments only apply to healthy skin, and that when applied to the diseased human epidermis the results may not be analogous.

The evaporation and drying of the various excipients, and their capacity of parting with the drug used, are points also to be considered.

Table showing Results of Experiments carried out for the Purpose of obtaining the Penetrating Power of Some Ointment Excipients.

Excipient.	Stain.	Strength of Stain.	Treatment of Skin.	Duration of Inunction.	When Excised.	Results.	Remarks.
1. Olive oil	Gentian violet	20 %	Shaved	5 min.	Immediate	General staining of upper layers good. Extends half down shaft of hair. Some roots	
2. *a*. Olive oil	Fuchsin	1 %	Shaved	2 min.	Immediate	General staining good. Extends down three-quarters hair follicle	Pieces of skin dried in formalin vapour for four days.
b. Vaselin. alb. ...	,,	,,	,,	,,	,,	Poor, one-quarter down follicle	
c. Adeps benzoat. ...	,,	,,	,,	,,	,,	A little deeper than (*b*)	
3. *a*. Olive oil	Gentian	2 %	Shaved	5 min.	Immediate	Upper layers well stained. Extends almost to foot of hair follicle	
b. Anhydrous lanolin ...	,,	,,	,,	,,	,,	Staining of upper part only	
c. Unguent. simplex	,,	,,	,,	,,	,,	Upper layers and a quarter down hair follicles	
d. Vaselin. flav. ...	,,	,,	,,	,,	,,	Very superficial	
4. *a*. Vaselin. flav. ...	$FeSO_4$	2 %	Depilatory powder	5 min.	Immediate	Very superficial	Pieces of skin kept in formalin vapour for two days, then cut with anaestile.
b. Goose grease ...	,,	,,	,,	,,	,,	General staining good. Well down follicles. Some roots	
c. Anhydrous lanolin ...	,,	,,	,,	,,	,,	Upper layers half-way down follicles	
d. Vaselin. flav. ...	Scharlach R.	,,	,,	,,	,,	Same as (*a*)	
e. Goose grease ...	,,	,,	,,	,,	,,	Same as (*b*)	
f. Anhydrous lanolin	,,	,,	,,	,,	,,	Same as (*c*)	
5. *a*. Lanolin	Scharlach R.	5 %	Hair clipped with scissors	5 min.	Immediate	Vaselin, superficial: rest deeper	Pieces kept in formalin vapour for two days Results marred and only comparative.
b. Vaselin. flav. ...	,,	,,	,,	,,	,,		
c. Cold cream ...	,,	,,	,,	,,	,,		
d. Myelocene, solid .	,,	,,	,,	,,	,,		
6. *a*. Myelocene, solid .	Fe SO_4	5 %	Depilatory powder	5 min.	1 hour	Iron not satisfactory, but reveals cold cream best and next this ung. simplex. Other two poor	Results marred by keeping in formalin vapour for two days.
b. Lanolin	,,	,,	,,	,,	,,		
c. Ung. simplex ...	,,	,,	,,	,,	,,		
d. Cold cream ...	,,	,,	,,	,,	,,		
7. *a*. Myelocene, solid .	Scharlach R.	5 %	Depilatory powder	5 min.	Immediate	Upper layers generally stained, but very little penetration	
b. Almond oil ...	,,	,,	,,	,,	,,	All three penetrate half-way down hair follicles, but generally staining best with olive oil	
c. Cedar oil	,,	,,	,,	,,	,,		
d. Olive oil	,,	,,	,,	,,	,,		
8. *a*. Paraffin. alb. ...	Oleate of iron	5 %	Depilatory powder	5 min.	Immediate	Effect quite superficial	Pieces dried in formalin vapour for two days. Sections treated with $(NH_4)_2S$
b. Myelocene, liquid	,,	,,	,,	,,	,,	Both show penetration half-way down hair follicles, but not much general staining	
c. Cedar oil	,,	,,	,,	,,	,,		
d. Vaselin. alb. ...	,,	,,	,,	,,	,,	Very superficial; only a quarter down hair follicle	
9. *a*. Lanolin	Scharlach R.	10 %	Hair clipped	10 min.	1½ hours	General staining good half-way down follicle	Pieces kept in formalin vapour for two days.
b. Vaselin. flav. ...	,,	,,	,,	,,	,,	Faint general staining, and only slightly into follicle	
c. Olive oil	,,	,,	,,	,,	,,	Hairs deeply stained nearly to roots. General staining good	
d. Myelocene, solid .	,,	,,	,,	,,	,,	Hairs three-quarters length stain. Good general staining	
10. *a* Pellanthum ...	Scharlach, R.	10 %	Hair clipped	10 min.	1½ hours	Very little penetration. General staining poor	
b. Myelocene, liquid	,,	,,	,,	,,	,,	Half down follicle. Poor general staining	
c Almond oil ...	,,	,,	,,	,,	,,	Half down follicle. Poor general staining	
d, Cedar oil	,,	,,	,,	,,	,,	Half to three-quarters down follicle Best of the four also as regards general staining	
11. *a*. Goose grease ...	Scharlach, R	10 %	Hair clipped	8 min.	5¼ hours	General staining and penetration half-way down follicles	
b, Benzoated lard ...	,,	,,	,,	,,	,,	Diffuse staining with colour well down hair. Some roots stained	
c. Anhydrous lanolin	,,	,,	,,	,,	,,	Very superficial	
d. Cold cream ...	,,	,,	,,	,,	,,	Good general staining. Some roots, but mostly half-way down the follicles	
12. *a*. Mercury mitin ...	Scharlach R.	10 %	Hair clipped	5 min.	1½ hours	General staining good, but only one-third down follicles	
b. Cream	,,	,,	,,	,,	,,	Extends half-way down follicle, general staining fair	
c. Ung. ophthalm. basic.	,,	,,	,,	,,	,,	Half-way down, good general staining. An occasional gland	
d Eucerin	,,	,,	,,	,,	,,	Superficial. Only the slightest penetration	
13. *a*. Ung. ophthalm. basic.	Scharlach R.	10 %	Hair clipped	5 min.	1½ hours	Good general staining. Two-thirds down follicle	
b. Glycer. amyli ...	,,	,,	,,	,,	,,	General staining poor. Penetration one-third down follicle, but irregular	
c. Glycer. amyli, hydrous lanolin, equal parts	,,	,,	,,	,,	,,	Good general staining, two-thirds down follicles	
d. Glycer. amyli, cold cream, equal parts	,,	,,	,,	,,	,,	Good general staining, two-thirds down follicles. Many glands stained	

* In the case of 4 (*a*, *b*, *c*) ferrocyanide reaction not successful. Better with $(NH_4)_2S$.

In conclusion I beg to tender my thanks to Dr. James Ritchie, the superintendent of the laboratory, for his ever ready assistance, and to Dr. J. A. Murray, of the Imperial Cancer Research, for his helpful suggestions.

REFERENCES.
[1] Unna's *Monatshefte*, 1906. [2] BRITISH MEDICAL JOURNAL, July 22nd, 1911.

HYDROCEPHALUS AS A SEQUEL TO SHOCK.

BY

A. KEITH ARMSTRONG, M.R.C.S., L.R.C.P.,

MONMOUTH.

THE following case presents several unusual features. The connexion between the initial shock and the condition of the nervous system found *post mortem* seems somewhat doubtful, though clinically the whole illness could be traced to the accident, before which he was strong and healthy. Immediately afterwards he could be accurately described as a nervous wreck. I very much regret that a lumbar puncture was not performed, and though this was considered it was not until the patient's condition was so bad that it would have been of no value. The absence of headache was an unusual feature, and although the intracranial pressure must at some time have been considerably increased, it was absent throughout the illness.

The patient, a man aged 54 years, by occupation a cowman, and accustomed to handling cattle all his life, both in this country and in New Zealand, of temperate habits and enjoying good health, was, on April 19th, 1911, knocked against a fence by a bull, and received a bruise on the right side of the chest. He complained of no other injury, but said he felt upset. He walked home unassisted, a distance of about 120 yards. He remained at home feeling very shaky, and suffering some pain from the bruise on his chest.

Four days later I saw him for the first time, and found a bruise on the right lower costal cartilages. This was the full extent of his injury, and was unimportant, but he was markedly nervous, starting when spoken to quickly, with tremors of hands sufficient to cause some difficulty in feeding. The knee-jerks were normal. He could give a clear account of the accident, which had been a great mental shock to him. He said that he thought the bull was going to kill him, which, indeed, seemed likely, and he had, in fact, a very narrow escape of his life.

Under treatment by rest, potassium bromide, and later by tonics, nux vomica, and lecithin, he slowly improved, and at the end of May, by my advice, went away to stay with a relative; when he returned home, three weeks later, although better, he was quite unfit for his work, still being very nervous, and himself stating that he was too frightened to resume his work among the cattle. For nearly four months he remained more or less *in statu quo*, taking his food well, sleeping well, complaining of no pain, and taking a certain amount of daily exercise, but still in a highly nervous state. Early in October he suddenly became much worse. The tremors of the hands increased and a slight tremor of the lips and tongue was present; all the reflexes were increased, ankle clonus was present, with some rigidity of the lower limbs. The plantar reflex was flexor and always remained so; the pupillary reactions were normal. His mental state was one of extreme anxiety about his condition.

During the next fourteen days he slowly got worse, with a slight increase of the rigidity, and showing some mental confusion, but still eating and sleeping well. The urine was free from albumen and sugar.

A further progress in the downward grade of the case now became evident, and on October 19th he was unable to get up. Reflexes were greatly increased. The whole body sharing in the rigidity of the lower limbs, he was unable to raise himself to a sitting posture, and when assisted on to his feet was unable to stand alone; but rather curiously he seemed able to maintain his balance while moving, and could walk fairly well. The optic discs were normal in appearance. His mental state was one of confusion with slow cerebration. The face presented a rather vacant appearance, quite unlike his usual expression. Sensation was normal.

From this time on he continued steadily to get worse, although his mental state varied from time to time, sometimes being quite clear and sometimes confused, and noisy, talking, picking at the bedclothes, etc. On some occasions micturition was involuntary, and occasionally, at irregular intervals, profuse sweating occurred without any alteration in the temperature. He took nourishment well, and obtained a sufficient amount of sleep, at irregular intervals. The temperature remained about normal, only varying between 97° and 98°. There was some catarrh in the lungs, with a good deal of expectoration, and it soon became evident that this condition was likely to become of vital influence in the case; and on November 5th the temperature rose to 103°, accompanied by a corresponding increase in the pulse-rate.

He now rapidly became weaker, and, in spite of the exhibition of stimulants, etc., he died from exhaustion on November 9th.

Necropsy.

Externally, over the sacrum was a reddened, inflamed patch, about the size of the palm of the hand, presenting the appearance of the commencement of a bedsore. There was no sign of injury to the ribs or adjacent structures. The right side of the heart was slightly dilated, otherwise normal, and the lungs were much congested and oedematous. All the abdominal viscera were healthy. The dura mater and arachnoid appeared to be normal. The convolutions were slightly flattened. On opening the brain it was seen that some dilatation of the ventricles was present. The ependyma seemed healthy. On the spinal canal being opened, there was a considerable excess of fluid found, the cord itself appearing normal to the naked eye.

Such a sequel to a nervous shock is rare, but it occurs to me that the condition of hydrocephalus which supervened may be more than a coincidence.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

NERVOUS RETENTION OF URINE.

IN the BRITISH MEDICAL JOURNAL of January 13th, p. 72, Dr. Harford Edwards has suggested a rectal injection of glycerine in cases of retention of urine—hysterical and after labour.

I find that these injections occasionally fail to produce the desired result. For the last ten or twelve years I have ordered a simple enema, not less than 0jss, which has never failed me, the rectum and bladder emptying themselves at the same time. The advantage of not having to pass a catheter after parturition is obvious.

London, N. FREDERIC C. WOOD, L.M.S., D.P.H.

ABSCESS OF THE SPLEEN COMPLICATING MALARIA.

IN no book that I have been able to consult is abscess of the spleen—at least of any size—mentioned as a complication of malaria. Some notes, therefore, on a case in which a large abscess was found may prove of interest.

H., an Indian male, aged 25, came to hospital in Gyantse, Tibet, complaining of attacks of shivering, pain in the abdomen and general weakness. He stated that he had been in perfectly good health until a month before, when, while passing through Sikkim, he was suddenly seized with violent shivering; this passed off in a few days, but ever since this attack he had noticed that he was considerably weaker and that his abdomen was swollen.

On admission on June 8th, 1911, the temperature was 101° F., pulse 90, and respirations 33. The spleen was considerably enlarged, its lower limit reached to within a quarter of an inch of the umbilicus, and in addition the organ projected markedly forward, forming a very evident prominence above the umbilicus. Under treatment with quinine the fever rapidly subsided and the patient was discharged on June 22nd.

I saw him frequently after this date and was able to diagnose malignant tertian malaria. He seemed to be progressing favourably until August 25th, when I was suddenly sent for as the patient "was in a fit." I found him suffering from violent convulsive spasms associated with coma, the case closely resembling one of tetanus. Under energetic treatment with quinine these symptoms subsided, leaving complete aphasia and great weakness. The aphasia passed off in seven days.

After the attack the patient, although he had no actual rise of temperature, began to complain of severe pain over the region of the spleen, which perceptibly enlarged. Various remedies were tried to relieve the pain but with little success. The patient persisted in saying that there "was something inside the spleen," but, although a careful examination was made, nothing definite could be made out. It seems extraordinary that such a large abscess as was eventually discovered could be present in the spleen without causing any rise of temperature or increase in pulse-rate, in fact, without causing any symptoms except pain.

As the pain increased, a needle was inserted into the most prominent part of the spleen; a little pus escaped. Next day I opened the abdomen under chloroform, and discovered a large abscess occupying the anterior half of at least the lower half of the spleen. There was no cyst wall encapsulating the pus, and the rest of the spleen appeared comparatively healthy. About 8 fluid ounces of pus escaped, leaving a ragged cavity in the spleen. This was explored with the finger for further collections of pus, and, none being found, a drain was inserted and the patient put back to bed. He stood the operation well, and looked much better next day. Blood films from the ear taken at the time of the operation revealed no parasite; films of pus from the spleen showed a bacillus apparently identical with *B. coli*.

For six days after the operation his temperature was normal,

but from September 27th (fifteen days after operation) his temperature chart began to show a slight evening rise. This continued for some days, associated with a slight increase in the amount of the discharge. Improvement in the patient's condition was maintained; in fact, he felt so much better that he left hospital on October 22nd. On October 29th he passed a little mucus and blood *per rectum*. A sudden attack of acute dysentery occurring on November 3rd carried him off. Unfortunately, no *post-mortem* examination was obtainable.

The interest of the case lies not only in its rarity and in the large size of the abscess (at least 12 oz. of pus escaped during his stay in hospital), but also in the question as to the source of the abscess. The presence of *B. coli*, and the subsequent dysenteric symptoms, seem to suggest an intestinal origin.

R. F. D. MACGREGOR,
Lieutenant, Indian Medical Staff.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

A CASE OF TETANUS: RECOVERY.

(By L. EDGAR ROBERTS, L.R.C.P.Lond., M.R.C.S.Eng., House-Surgeon.)

THE patient in the following case, a man aged 40, occupied as a scavenger, was admitted under the care of Mr. W. L. Woollcombe, senior honorary surgeon, on January 14th, 1911. He stated that he had never been ill in his life, but a week previously felt a pain in the small of the back and the next morning found it difficult to swallow. His throat was sore, and he thought he had a "chill." Hence next day he consulted a doctor, who advised his going into hospital. This advice he carried out two days later, and was admitted as stated.

State on Admission.—He was a well built man, temperature 97.4°, pulse 50, respirations 15, and walked into hospital with a rather stiff upright gait. He said he felt "all one piece." There was well marked trismus of the jaws, these opening only half an inch. The spinal and abdominal muscles were markedly rigid, the latter standing out as two distinct ridges on the abdominal wall.

Diagnosis.—A diagnosis of tetanus having been reached, a search was made for the point of entry of the infection. The patient's hands were very cracked and very dirty, but showed no recent marked abrasion. On the right wrist, just above the anterior annular ligament was an oval abrasion the size of a threepenny piece, which the patient said had been caused on the morning of the day he first felt ill, but there were no other lesions.

Treatment—The hands were soaked in iodine solution (tinct. ʒj ad Oj) for two hours, and the abrasion swabbed over with pure carbolic. Initial doses of antitetanic serum 60 c.cm., and 10 c.cm. of a 10 per cent. solution of magnesium sulphate (see paper by Peter Paterson, M.B., *Lancet*, April 2nd, 1910) were given, then 20 c.cm. of the serum and 10 c.cm. of the $MgSO_4$ solution every four hours for a few days, amounts being increased and decreased according to symptoms. This was continued until the seventh day, all the injections being given subcutaneously, together with potassium bromide gr. xx by the mouth four-hourly for five days.

Progress and Result.—There were two definite attacks of the typical spasm, opisthotonos, etc., the first on the second day after admisson lasting fifteen minutes, the second on the third day lasting ten minutes; both left the patient very exhausted. The rigidity of muscles continued until the fifth day, being most marked in the recti. Coughing and pain in the back were troublesome symptoms. The serum injections were practically painless; those of the $MgSO_4$ solution, however, worried the patient a good deal, and gave rise to much irritation, but no rash. He was able to take fluids throughout and was allowed up on the fourteenth day, and except for some soreness of feet felt well. He was discharged on the twenty-first day, apparently in perfect health.

REMARKS.

Another case of tetanus of no greater severity had died two weeks previously; in that case large doses of antitetanic serum were given, but no magnesium sulphate.

I am indebted to Mr Woollcombe for permission to publish these notes.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Tuesday, January 23rd, 1912.

DR. FREDERICK TAYLOR in the Chair.

Vaccine Treatment of Goitre.

A PAPER on this subject was read by Captain MCCARRISON, I.M.S. He reminded the meeting that he had shown that the infecting agent existed in the intestinal tract, and that a plentiful amoebic infection was present in this situation in most of the cases of goitre in Gilgit; he had been endeavouring to cultivate amoebae from the faeces of sufferers from the disease. In the early stage no attempt was made to isolate any particular organism, and the vaccine was a composite one, and was administered to selected cases at intervals of seven to ten days. The results were strikingly good. The bacterial growth had the characters of the *coli* group, but differed from the *Bacillus coli* in that it did not produce indol. A vaccine was prepared from the bacillus and employed in 16 selected cases of goitre, the initial dose being 150 million. It was gradually worked up to 350 million by 50 million increments. He quoted cases of great improvement, the patients carrying on their ordinary work during the treatment. He had treated 33 selected cases of simple goitre by means of vaccines. The "composite" vaccine appeared to have been the best. He believed in inoculating only a small quantity of the vaccine, and that it was better to introduce 150 million bacteria in 5 m. of salt solution than in 1 c.cm. of it. When the inoculation was done in the upper arm the patient was usually able to follow his ordinary avocation. He usually employed an autogenous vaccine, but had obtained excellent results by using the vaccine of one patient for the treatment of another. He had produced goitre experimentally in man by the administration of matter separated from a goitre-producing water by means of a Berkefeld filter. The organisms which had resulted in a return of the thyroid to its normal size, belonged to the *coli* group, and in the intestines they produced poisons—indols and phenols—which were absorbed via the intestinal wall and caused fibrotic changes in liver, kidneys, and arteries. The suggestion was that the thyroid gland was called upon to combat several poisons normally present in the human intestine. When there was superadded the specific virus of goitre an abnormal element was introduced, and an extra strain was thrown upon the gland. The researches confirmed the view he put forward several years ago—that goitre was due to the presence of a living organism in the intestinal tract, and that the thyroid gland was markedly influenced by the nature of the bacterial flora of the intestine. He also emphasized the importance of the antitoxic action of the thyroid mechanism.

Dr. LANGMEAD said there were three main classes of case in which the thyroid gland had a specific influence in preventing intoxication: (1) In cases of pregnancy and uterine function generally; (2) rheumatoid arthritis; (3) tetany. It was thought that the thyroid enlargement was actually antagonistic to an agent circulating in the blood.

Dr. PARKES WEBER said that if the author's explanation of his results was correct, the goitre which he treated must have been an enlargement of a compensatory nature to counteract certain poisons manufactured in the intestine. On the same assumption, if the author had fed these patients upon thyroid extract he would have brought about a diminution of the thyroid.

Mr. JAMES BERRY said it was generally agreed that most cases of goitre were due to some toxic influence, and the chemical theory was being exploded in favour of the microbic view. There was a residuum of cases which the surgeon was called upon to treat—those which did not yield to iodine, arsenic and thyroid gland, or to vaccine treatment. Except in cases of great urgency, no surgeon should operate on a parenchymatous goitre until it had been carefully treated medically—a view with which Captain McCarrison agreed. He asked whether diarrhoea occurred in any of the patients. Probably arsenic acted beneficially

on the thyroid in that way. He thought that what was called parenchymatous goitre was not hypertrophy, but atrophy, though there was enormous distension with stagnant secretion.

The PRESIDENT asked whether some common agent or mode of action could be discovered in all the remedies which had been tried, and that mode of action linked up with that of the vaccines employed.

Dr. ROBERT HUTCHISON asked how long the effects lasted in the author's cases, and whether there was any return of the goitre some time after the vaccination. He expressed the opinion that the idea of intestinal toxaemia was far too current in modern medicine, and was commonly used to explain ill-understood congeries of symptoms. He had a greater faith in Nature than that. She did not provide bacteria in the alimentary tract without also providing, in the liver, a gigantic sentinel, which stood guard at the entrance to the portal system to deal with any poisons so generated. He was surprised to hear Mr. Berry say that parenchymatous goitre should be regarded as an atrophy, as that made it difficult to explain the benefit produced by the administration of thyroid. He proceeded to discuss the subject in a general way, laying stress on the stimulation of the metabolism exercised by the curative agents.

Dr. CROOKSHANK asked whether the goitres which the author investigated tended to disappear spontaneously; also whether endemic cretinism occurred in Gilgit, and whether the children of the goitrous patients were cretinoid.

Captain MCCARRISON replied, stating that the results had lasted since 1909. The vaccine acted, like the other substances, by destroying the toxin in the gut. Cretinism was very common in Gilgit.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

January 10th, 1912.

Dr. F. H. JACOB, President, in the Chair.

THE mid-session address was delivered before the Society and the Nottingham Division by Professor SIMS WOODHEAD, who took as his subject the *Laboratory and clinical work*. He confined his remarks chiefly to the recent work on body temperature and electro-cardiograms. He pointed out the great advantage to clinical medicine in having a continuous temperature chart for the whole twenty-four hours in such diseases as tuberculosis. It was the late Dr. Gamgee who initiated the taking of continuous temperature records by means of thermo-electrical methods. Professor Woodhead continued his work chiefly in connexion with investigating the effects of alcohol on the body temperature. The initial work was enormous, and it took eight to nine months before he obtained his first satisfactory record. After that, however, the work became comparatively easy. Dr. Woodhead explained in detail the photographic temperature recorder of Dr. Gamgee, and also the thread recorder. By means of arrangements with the National Telephone Company a continuous temperature of a patient in the Addenbrooke Hospital was automatically recorded in the university laboratory. The lecturer then stated that small doses of alcohol raised the surface temperature and lowered the rectal temperature; food lowered the surface temperature, but if accompanied by warm fluid the temperature was raised; that fluids immediately raised the rectal temperature, but only for a short time. It was possible in the future that all hospital patients could have continuous temperature records taken, and this should be of great use in enabling us thoroughly to study the progress of disease. Professor Woodhead explained the principles of taking an electro-cardiogram and the details of the machine used. Lantern slides were shown to illustrate his remarks. Electro-cardiograms were almost as characteristic of individuals as were finger-prints; so much so that any variation in an individual's electro-cardiogram meant that there was some lesion of the heart. In Addenbrooke's Hospital a record was now taken of every case of heart disease, and it was hoped that in time these might, by comparison with future necropsies, lead to much usefulness.

Mr. A. FULTON, in proposing a vote of thanks, wondered whether the taking of continuous temperature records and cardiograms would be part of the duties of an insurance doctor, and drew a vivid picture of the tired general practitioner being suddenly awakened in the night by the sudden flash of the galvanometer mirror on the ceiling telling him a patient a mile away had had a sudden rise of temperature.

Dr. P. BOOBBYER seconded the vote of thanks.

Cases and Specimens.

A clinical afternoon was held on January 17th. Dr. F. H. JACOB, President, was in the chair. The following cases and specimens were shown:

Mr. C. H. ALLEN: A patient, aged 38, who was operated upon for perforation of gastric ulcer. A large perforation, with indurated edges, found on the anterior surface of the pyloric end of the stomach, was closed. Three weeks later the patient showed signs of pyloric obstruction necessitating a posterior gastro-enterostomy. *Specimens:* (*a*) Specimen of pyosalpinx and abscess of ovary complicating a fibroid of the uterus. (*b*) Specimen of hypertrophy of prostate gland.

Dr. H. J. NEILSON and Dr. LYN DIMOND: Two cases of epithelioma, illustrating the value of treatment by autogenous vaccines.

Mr. R. G. HOGARTH: (1) A man who had a large aneurysm of the left subclavian artery. The artery was ligatured on the proximal side after subperiosteal resection of the clavicle. (2) A man who had a chronic ulcer on the posterior wall of the stomach. The ulcer was excised by the transgastric method. (3) Two men after prostatectomy, showing the prostate glands removed. They both had the usual symptoms of prostatic obstruction, in one case the gland was large, in the other small.

Mr. H. B. TAWSE: (1) W. G., a boy of 8 with narrowing of the pharynx, adhesion of the uvula to the left posterior pillar of the fauces, necrosis of the right nasal bone and nasal process of right superior maxillary bone, all due to syphilis. History of having had tonsils and adenoids removed twelve months ago. Rapidly improving under mercury and potassium iodide. (2) H. E., a girl of 10 with perforation of the septum, an ulcerated condition of the interior of the nose and upper lip, clearing up with mercury and pot. iod. (3) H. T., a man of 45. Periodical hoarseness for years—gradually became constant—obstruction to respiration with slight cyanosis. Both vocal cords had large fibro-papillomata on them, which were removed with the greatest difficulty by Krause's laryngeal forceps under local anaesthesia. Now in perfect health, voice greatly improved. Specimen shown.

Dr. J. WATSON: *Specimens:* (*a*) Microscopic section of cancer of cervix uteri in parts resembling sarcoma. (*b*) Microscopic section of curetting from fundus uteri showing glandular cancer. History of bloodstained discharge for over a year; the discharge consisted of broken-down cancerous tissue with a small amount of blood. (*c*) Myoma of uterus showing series of tumours becoming submucous. History of six years' haemorrhage.

Dr. W. R. SMITH: *Specimen:* Myoma of uterus, growing from the back of fundus and almost filling the pelvis, while the small uterus proper was high up in front.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, January 25th, 1912.

Mr. J. B. LAWFORD, President, in the Chair.

Hereditary Ophthalmoplegia in Five Generations.

MR. A. A. BRADBURNE read a paper on this subject. In this family there was a condition of ptosis accompanied by an almost complete loss of the ocular movements, which had been present in five generations. After enumerating the members affected and briefly describing the condition in each, Mr. Bradburne proceeded to consider the various types of this rare affection. He classed anomalies of congenital ocular immobility into three divisions: First and most common, those in which only ptosis was present; secondly, when this was combined with epicanthus; thirdly, a type in which ptosis might or might not be present, but in which the ocular movements were very defective or altogether wanting. This latter type embraced three subdivisions: (*a*) Ptosis associated with defect of the superior rectus; (*b*) more extensive involvement of the eye muscles with or without ptosis, the condition being due to some nerve lesion; (*c*) this type included the same kind of matters, but the condition was due to entire absence, or very defective development of, the muscles His own case came under this category. In two of the younger members a certain return of the movements had occurred, and the author suggested how this might have come about. He showed that in the shark the ocular muscles arose from three centres—one for the superior obliques, one for the abductors, and the remaining four muscles arose in pairs from a third. These paired muscles were the superior

with the internal rectus, and the inferior rectus with the inferior oblique. In all the members of this family the superior obliques were probably present; hence, if any further movements became possible one would expect their appearance to follow somewhat the lines as seen in the shark. In one of the members of the family it had done so, as one eye was able to move from a point straight in front outwards, thus seemingly pointing to a development of the second centre. But that did not follow in another case in which both eyes possessed full lateral motion. By analogy one would expect to find development of motion in the upward direction, but such was not present. Hence the human development was from a different centre to that of the shark, or another factor was present in the case. As the patient had ptosis, motion in an upward direction would not be of much practical use, hence it seemed as if the visual act had had something to do with the "evolution." This seemed probable as, in the same case, to prevent diplopia, the visual act had produced a convergent squint. Finally, he asked if the argument could be logically reversed and the condition of muscle palsy attributed to a long-continued non-use of the eyes in some ancestor afflicted with ptosis.

On Crystal-like Bodies of Radiate Structure in the Lens.

Mr. GEORGE COATS read a paper in which he said they were found in a hypermature cataract in a woman aged 69, and had not been seen clinically. In the lens nucleus, which had undergone but little degeneration, round and oval bodies, measuring from 0.035 to 0.160 mm., were found. They had a refractile crystalloid appearance, and were marked by numerous fine lines converging towards an axial linear streak or spot. There was frequently a tendency to cleavage along these lines, so that the body was split up into a number of radially disposed pyramidal sectors, not unlike the pyramids of the kidney. In the larger crystals there was a central tuberculated mass of mineral hardness, the structure resembling that of a rubber-cored golf ball. Usually the adjacent lens fibres were arranged round the crystals to form a kind of capsule. Only two similar observations were on record, in one of which the bodies were seen clinically as globular beads with a silky or pearly sheen. In all these cases the lens was cataractous; in two the opacity was senile, in one lamellar, the patient being a child of 6. In all the crystals were confined to the more central layers of the lens. As to the nature of the crystals, the scarcity of material made it impossible to carry out extensive histo-chemical researches, but they showed considerable structural resemblance to leucin, a diagnosis which was sufficiently probable, since the crystals occurrred in cataractous lenses, and leucin is a product of proteid disintegration. They occurred, however, in the least degenerate part of the lens. Hydrochloric acid produced no effervescence. Dr. W. H. Wilcox, who examined the specimens, reported that the appearance of the bodies was "similar to that which leucin takes when it has been subjected to dehydrating processes."

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

Friday, January 19th, 1912.

Dr. DONALD (Manchester), Vice-President, in the Chair.

Election of President.

DR. ARNOLD W. W. LEA (Manchester) was elected President for the ensuing year.

Caesarean Section.

Dr. STOOKES (Liverpool) related the following cases of Caesarean section: (1) A woman, aged 30, who had had three normal labours and gave no history of trouble in the present pregnancy, was seen at five in the morning by two doctors, who found her with strong labour pains and the vagina blocked by a tumour; so they sent the woman to the Maternity Hospital. On admission an arm was presenting, and the vagina was blocked by a soft fibrous mass which passed within the cervix; no pedicle could be reached. The general condition of the patient was fairly good; she was pale, her pulse was about 100. The abdomen was larger than usual, but not tender. Caesarean section was done, and a dead child was extracted weighing 6 lb. 6 oz. After removing the placenta and membranes the tumour was found to have an extensive attachment to the posterior wall of the uterus, so supravaginal hysterectomy was done. The woman died from shock eight hours after. (2) A patient, aged 42, who had had eight normal labours. She was vomiting incessantly, and was constipated; the bowels had moved slightly two days previously. The abdomen was not enlarged more than a full-time pregnancy, and there was no hyper-resonance. Dr. Stookes decided on operation, as he thought there must be intestinal obstruction. After a dead child of over 7 lb. had been removed the peritoneum was found to be salmon pink in colour and studded with small yellow spots. The whole of the small intestine was empty and collapsed. The large intestine was attached by a mesentery 7 in. in length, which allowed the caput caecum to fall into the pelvis. Dr. Stookes thought this must have caused incomplete obstruction, and the empty state of the bowels was due to the reversed peristalsis. He now believed the explanation offered at their meeting by Mr. Cuff to be the probable one: that the woman was suffering from acute pancreatitis. The patient recovered from the anaesthetic and said she was much relieved, but she died next day from exhaustion.

Retroversion of Uterus.

Miss IVENS (Liverpool) read a paper analysing 100 consecutive cases of retroversion of the uterus, treated by round ligament ventrisuspension (Gilliam's operation), in which the after-history had been ascertained in 93 cases. There had been no mortality; 93 had healed by primary union, and in one case only relapse had occurred owing to the tenuity of the ligaments. In 32 uncomplicated cases the results were most satisfactory, while in 11 associated with marked prolapse the uterus was held up well by the round ligaments, which showed extreme hypertrophy after operation. In 46 cases where adnexal disease was present good results were obtained in all but the gonorrhoeal cases, where further inflammatory trouble took place in 11 instances, although the uterus maintained its position. In 3 cases out of 4 with uterine fibroids myomectomy followed by Gilliam's operation was successful; the fourth subsequently required hysterectomy for a submucous sessile tumour. In 20 instances pregnancy had since occurred. Of these 11 had borne children with no difficulty, 6 were still pregnant, 3 had had abortions. As no ill after-effects were present in the 93 cases followed up, it was concluded that the operation was a safe and successful one when done under suitable conditions, and could be undertaken during the child-bearing period. From a careful consideration of the history and symptoms of the cases recorded it was also concluded that in the majority of instances even a simple retroversion of the uterus ultimately caused pathological changes in the pelvic organs, beginning with passive venous congestion, and that for this and other reasons therefore required treatment.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting held on January 25th, Mr. ROBERT JONES, President, in the chair, Mr. THOS. GUTHRIE read a note on the *Recurrence of adenoids*. He pointed out that recurrence was seen most commonly in children operated on under the age of 4 years, even when the operation had been as complete as possible. Recurrence was not frequent in those between 4 and 7 years of age, and practically did not occur in patients over 7 where the operation had been thorough. Mr. Guthrie showed a photograph of the naso-pharyngeal tonsil removed from a child of 3, and of the growth which recurred at the age of 5. He said recurrence was favoured by attacks of the specific fevers, by congenital syphilis, and by anterior nasal obstruction from bony deformities. He urged after-treatment of the posterior nasal catarrh and attention to the general health conditions of the patients. Dr. BUCHANAN demonstrated the method of *Tuning-fork vibration and auscultation*, and read a note on the subject. He used a fork of "A" pitch, which was struck and the stem placed on the part to be examined; the stethoscope was applied and the fork moved by small steps over the part. The sound vibrations varied with the nature

of the part over which the fork was resting. He claimed that by this method it was possible to map out organs accurately, to differentiate solid from liquid, the colon from small intestine, and the stomach from the colon. He could map out portions of consolidated lung and mediastinal tumours. In one case he had been able to make out an alteration in the size of a kidney which had been verified by separation of urine, and by the findings at the operation. Dr. WARRINGTON read a paper on the results of 17 cases of *Exploration of the brain*. The skull had been opened for symptoms resembling those of tumour of the brain. The operations had been mainly done by Mr. Keith Monsarrat. Of 9 cases of cerebellar exploration death took place soon after operation in 5; in these the diagnosis was confirmed by *post-mortem* examination, and in 2 by the findings at the operation. In 4 cases the patients recovered, 3 were alive and well with the vision preserved. One became blind; in this patient nothing was found at the operation, though bilateral exploration was made. In two of these successful cases nothing was seen at the operation; in one a tumour was diagnosed, and found on the left side of the cerebellum. In 8 cases of cerebral exploration, 4 were fatal within a month. In one a tumour in the right parietal region was partly removed, with relief of agonizing pain, the patient living a year. In 3 cases where no gross lesion was found at the operation relief was obtained from the symptoms; one was alive and well, with improved vision, five years after operation; another three years after operation, and one died a year after with right hemiplegia. Dr. Warrington had found that advanced cases did not improve in vision and the condition of the discs, but where the operation was done in the earlier stages of the alterations improvement was to be looked for as the result of a decompression operation. Considerable discussion took place, in which Mr. THELWALL THOMAS, Mr. DAMER HARRISSON, Mr. E. STEVENSON, Mr. H. E. JONES, Dr. MARSH, Dr. ABRAM, Mr. STOCKDALE, Mr. MURRAY, Mr. C. G. LEE, and Dr. HURTER took part.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

AT a joint meeting of this Society with the Bradford Division, held on January 16th, the following specimens and cases were shown:—Dr. CAMPBELL: A case of *Sprue*. Mr. ALTHORP: (1) A patient after operation for *Cancer of the rectum*, (2) specimens from a case of *Acromegaly*. Dr. HONEYBURNE: (1) Microscopical specimens from Mr. Althorp's case of *Acromegaly*, (2) microscopical specimens from a case of *Acute pancreatitis*. Mr. BASIL HUGHES: (1) Two cases of *Cellulitis of the palm* treated by autogenous vaccines, (2) cases of *Injury to the elbow*, (3) a case of *Gonococcal arthritis* of the wrist-joint treated by vaccine. Mr. BASIL HALL: (1) Lantern slides of surgical cases, (2) *Osteo-sclerosis of the tibia* from a case of gangrene of the leg, (3) *Carcinoma of the rectum*, (4) *Endothelioma of the head of the tibia*, (5) *Cystic tumours* in connexion with (*a*) appendix, (*b*) rectus abdominis, (6) *Hypernephroma*, (7) *Carcinoma of body of uterus*. Dr. JASON WOOD: (1) A case after operation for *Ectopia vesicae*, (2) a case after *Suture of the patella* for fracture, (3) specimen of *Cancer of trachea and oesophagus*, (4) *Epithelioma* of skin over elbow-joint, (5) advanced *Carcinoma mammae*. Dr. MARTIN: (1) Specimen of large *Nasal polypus*, (2) specimen of an *Early ovum*. Mr. GOYDER: (1) Lantern slides of *Congenital dislocation of the hip* before and after reduction by the Lorenz method, (2) lantern slides of cases of *Hare-lip and cleft palate*, (3) photograph of a case of *Epispadias*, (4) *Carcinoma of colon* removed from a woman of 32. Mr. MCEWAN: *Uterine fibroid*.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

AT a meeting of this society, held on January 18th, Dr. ROBERT HUTCHISON, Physician to the London Hospital, opened a discussion on *Rickets*. He reviewed very briefly what little was known of the pathology, and the clinical types were shortly dealt with as being known to all. To the etiology and treatment he referred more particularly. He dismissed in a word such exploded theories of etiology as congenital syphilis, dilatation of the stomach, microbic infection, intestinal intoxication, absence or defect of internal secretion, and trophic or nervous influences. He considered more fully the lime and acid theories, ultimately dismissing them also. Finally, while acknowledging the undoubted though accessory importance of the general hygienic conditions, he ascribed the disease to erroneous feeding, *the only cause*. For confirmation of this view he turned to clinical experience and the assistance to be gained from the effects of treatment. Little doubt could be entertained that deficiency of fat was the chief factor, but he did not reject the possibility of deficiency of protein and phosphorus acting as an adjunct to it. Treatment was mainly dietetic. In prophylaxis the chief faults to be avoided were (1) too prolonged breast feeding, and (2) in bottle-fed children, too dilute a mixture being used. Increase in the amount of fat administered was the most important measure to be adopted—for example, cod-liver oil, or cotton oil, which was as good, supplemented by phosphorus and iron. He considered diarrhoea no bar to the administration of fat, as was formerly thought. An animated discussion followed, to which Dr. HUTCHISON replied very ably.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held on January 19th, Dr. FREELAND FERGUS, President, in the chair, Mr. A. ERNEST MAYLARD showed a boy, aged 10 years, who had been admitted to the Victoria Infirmary in September, 1911, suffering from an extensive *Compound comminuted fracture of the cranial vault in the right parietal region*, with escape of brain tissue, and signs of fracture of the base of the skull. At the operation the extruded brain matter and depressed fragments of bone were removed and other portions of bone elevated. The wounds remained aseptic throughout, but the boy was delirious for some days, and for a fortnight was not expected to survive. Thereafter he made a good recovery, and when shown, about three months after the accident, was mentally acute and physically active. Dr. R. SPEIRS FULLARTON showed a boy, aged 9½ years, who during the past three years had had three attacks of *Haematuria* and now had a large *Tumour in the region of the right kidney*, which was said to have been noticed first about three months ago. The diagnosis was thought to lie between cystic kidney, malignant tumour of the kidney, and hypernephroma. Dr. Fullarton also gave a short account of the *Albumen reaction of the sputum in pulmonary tuberculosis*. His observations, made in 50 cases of phthisis and 50 cases of chronic bronchitis and other non-tuberculous pulmonary affections, confirmed the statements of Continental observers that in the great majority of cases of phthisis, and in pneumonia during the acute stage, albumen was present in the sputum in considerable amount, while in the majority of cases of non-tuberculous conditions (excepting pneumonia) albumen was either absent or present in trifling amount. The proportion of cases in which this rule did not apply, was, however, sufficiently great (as had been shown by Dr. Nathan Raw, and as the speaker had found) to diminish seriously its value in the differential diagnosis between tuberculous and non-tuberculous diseases of the respiratory organs. Dr. JAMES H. NICOLL showed (1) three examples of *Meckel's diverticulum* which had been removed in consequence of their having caused intestinal obstruction; (2) a large *Mesenteric fibro-sarcoma*, with three-fourths of the small intestine necessarily removed with it; (3) masses of lymphatic vessels excised in a case of *Filarial lymphangiectasis of the spermatic cord*; (4) *Vesical calculi* of unique composition removed in a case of prostatic haematuria; (5) a large number of specimens from recent cases in which "*Piecemeal*" *prostatectomy* had been performed. He strongly recommended the piecemeal method of removing the prostate, of which, he said, surgical opinion was increasingly in favour. Dr. G. H. EDINGTON showed a specimen of an old *Fracture-dislocation of the upper end of the humerus*, and photographs of a case of old *Fracture of the patella*, with wide separation of the fragments.

THE eighth International Congress of Applied Chemistry will be held in Washington and New York in September, 1912. The Congress is under the patronage of the President of the United States. Mr. Edward W. Morley is Honorary President; Mr. William H. Nichols, President; and Mr. Bernhard C. Hesse, Secretary (25, Broad Street, New York City).

Reviews.

PATHOLOGY OF THE NERVOUS SYSTEM.

THE valuable *Collected Papers from the Pathological Laboratory of the London County Asylums*[1] opens suitably with Dr. F. W. Mott's Presidential Address on The Present Position of the Neurone Doctrine in relation to Neuro-Pathology, here reprinted from the *Proceedings of the Royal Society of Medicine* of November, 1909. The neurone concept, emanating originally from Forel, but re-introduced by Waldeyer in the following terms: "A neurone is a nerve cell and all its processes, including the protoplasmic processes or dendrons and the single axis cylinder or process with its cone of origin, its collaterals or side branches, and its terminal arborization," and according to which the whole nervous system was made up of such neurones, nervous units, contiguous but not continuous, and each genetically and trophically independent, had its requiem sung by many eminent workers years ago. In the present paper Dr. Mott maintains that this doctrine rests to-day upon a surer basis than ever, owing especially to the work of Ross Harrison and Ramon y Cajál. His paper is illustrated by excellent diagrams and photographs showing the decisive value of Ross Harrison's transplantation and other experiments upon tadpoles upon the fundamental question of the source of origin of the nerve fibres. By removing the ganglion crest of the embryo of *Rana esculenta*, this crest being already known to be the source of the nerve sheath cells, and regenerative processes being satisfactorily prevented, Ross Harrison found that motor fibres were developed. He was finally able to show that the sheath cells were incapable, without ganglion cells, of forming nerve fibres; and further, by a remarkable series of experiments, he demonstrated that the nerve fibre begins as an outflow of hyalin protoplasm from cells situated in the central nervous system, at any rate in the low vertebrates with whom he was working. Harrison has thus confirmed, by direct observation, the observations of Cajál and others in favour of the genetic independence of the neurone.

Turning to the trophic independence of the neurone, Dr. Mott describes a series of experiments made by Professor Halliburton and himself to discover whether or not regeneration of motor nerves was interfered with by cutting off stimuli, so far as they were able, from the spinal motor neurones of a limb. The results of these experiments were negative—that is, to quote Dr. Mott's words, "the trophic activity of the spinal motor neurones is therefore, in all probability, independent of stimulus arriving from other neurones. They possess, indeed, a trophic autonomy." With regard to functional autonomy, however—a very important matter—Dr. Mott says, although many valuable researches have been published, we are still far from understanding the problem. He admits that there is no proof that the dendrites exercise amoeboid movements, and further, that there can be no question that Apathy and Bethe are right in asserting that there is a fibrillary continuum through several ganglion cells. The question remains whether this continuity exists in the vertebrates. This is a question, we take it, which has already been answered in the affirmative, but even admitting this, Dr. Mott says:

> It is admitted that the lower we descend in the zoological scale the more obvious is the fibrillary continuum, and the simpler and less varied are the adaptations to environment. We may assume, therefore, that in the upward development of the animal series, with the complexity and refinement of motor adaptation, there coexists a neuronic independence.

The second paper in the series is a short but admirable article by Dr. Mott on syphilis and parasyphilis of the nervous system. He says that although in syphilis of the nervous system cases are divided into spinal and cerebral for clinical convenience, his own experience tends to show that the whole cerebro-spinal axis is usually, if not always, affected. He relates instructive cases in which primary symptoms appeared within a few months of the primary infection, and mentions that although Gowers in his Lettsomian Lectures in 1890 scathingly criticized the evidence brought forward by Long and others to show that a slight meningitis might be associated with the early phenomena of syphilis, the modern conception of the cause of the roseolar rash by the spirochaete of syphilis escaping from the blood in the cutaneous vessels, makes it possible that a similar infection of the cerebro-spinal meninges may occur. Also that just as the roseolar rash may be so slight as to escape observation, so the eruption in the meninges may be so slight as to escape notice, and the virus may remain latent until some other cause acts as a coefficient in the production of a definite lesion with symptoms.

Turning to the obscure mode of causation of parasyphilitic affections, Dr. Mott first refers to certain facts which suggest the possibility of a certain form of virus possessing, or having acquired, a special neurotoxic action. He quotes Babinski, who reported the case of two students who were infected on the same day from the same individual, both of whom died fifteen years later of general paralysis. These students, however, were kinsmen. Other cases are mentioned, of whom the most striking is the following, given by M. Morel-Lavallée:

MARTHE X.

May, 1870, mistress of Primus (?) (medical student), and gave him syphilis. He died, 1873, of syphilitic meningitis.	Dec., 1871, mistress of Secundus (medical student), to whom she gave syphilis. He married later, had two healthy children, and died, 1888, of general paralysis.	Jan., 1872, lived four years with Tertius (medical student). He married later, had two healthy children, and died, 1882, of general paralysis.	Later, mistress of Quartus (chemist). He died, 1890, of general paralysis.	Still later, mistress of Quintus (engineer). He died (no date) of *folie syphilitique*.

Another instance is that related by Brosius of seven glass-blowers who suffered from chancre of the lip, and out of five who ten years later came under observation, four suffered from tabes or general paralysis.

Striking as these instances may be, Dr. Mott considers that we are on safer ground if we attribute the effects which follow infection not to the variation of the virus, but to the reaction of the individual himself, as represented in the following equation:

$$\text{Symptom complex } X = \frac{V}{R} = \frac{\text{virus}}{\text{resistance.}}$$

That is to say:

> Parasyphilitic disease of the nervous system depends upon two factors, intrinsic-innate, and extrinsic-acquired—the soil and the seed; the vital resistance and the specificity of the virus, $\frac{V}{R}$. All those conditions which may be inherited or acquired, and which tend to active metabolism of systems, communities, and groups of neurones functionally correlated, and which, owing to those conditions of stress which in one individual would cause spinal neurasthenia, in another cerebral neurasthenia, will, in conjunction with the stimulating effect of the syphilitic poison, cause the nerve cells to exercise an abnormal metabolic activity in the production of the side chain molecules necessary for immunization against the toxic effects of the virus.

Dr. Mott follows up this argument by saying that we may suppose that there is an *inherent* aptitude of the cells of the body of certain individuals to readily adapt themselves to defence against the action of the syphilitic virus in a race that has been widely syphilized for generations, and concludes by affirming the uselessness—indeed, positive harmfulness—of antisyphilitic remedies in true tabes and general paralysis, because they lower the vital energy in a system which is hypersensitive to the syphilitic virus.

As the paper on the Wassermann reaction in general paralysis of the insane, by Drs. J. Henderson Smith and J. P. Candler, was originally printed in the BRITISH MEDICAL JOURNAL of July 24th, 1909, further mention is not required here.

Other papers contained in this series deal with Cortical Lamination and Localization in the Brain of the Marmoset, by Drs. Mott, E. Schuster, and W. D. Halliburton; Complete Survey of the Cell Lamination of the Cerebral Cortex of the Lemur, by Dr. Mott and Miss Agnes Kelly; the Nerves of the Atrio-ventricular Bundle, by Dr. J. Gordon Wilson, of Chicago University; a Systematic Histological Examination of the Central Nervous System of a Case of Transverse Lesion of the Spinal Cord in the

[1] *Collected Papers from the Pathological Laboratory of the London County Asylums.* By Several Authors. Drake, Driver and Leaver, Ltd. London. 1911.

Lower Cervical Region, by Sidney V. Sewell and H. Hume Turnbull; and Descriptions of Three Chinese Brains, by Dr. E. H. Schuster.

There is also a short paper illustrated by photomicrographs upon the appearances presented by the brain of a man who lived seven hours after receiving an electric shock of 20,000 volts, by Professor Mott and Dr. Edgar Schuster. The changes included haemorrhages into the cortex of the occipital lobe and a diffuse chromatolysis of pyramidal cells and in cells of the medulla oblongata of profound degree.

Finally, there is a paper on the human pituitary body by Drs. J. P. Candler and A. W. Sikes. In their investigations, which were carried out on the pituitary bodies of eighteen males and twenty-six females, the authors endeavoured to discover whether the results which had so far accrued from the investigations into the pituitary bodies in the lower animals held good also for men. The result was that no difference in structure or function was discovered. Secondly, they endeavoured to ascertain whether any departures from the normal occurred in the pituitary bodies of the insane, again with negative results, no relation being discovered between the nervous affections for which the patients were admitted and the condition of the pituitary.

For the further details of this careful investigation readers are referred to this most valuable collection of papers.

BIER'S HYPERAEMIC TREATMENT.

IN *Arthritis*[2] Mr. PETER DANIEL formulates the opinions he holds as to the pathology and treatment of diseases of the joints. The manner in which he states his views has the advantage of leaving the reader in no doubt as to his opinions, which appear to be definite enough, but the very decision of his conclusions may make the cautious student hesitate to accept them. For in this complicated and long-debated subject much is still uncertain, and only time and further investigation can show where lies the truth. The author has evidently found it difficult to draw a sharp line between disease of bone-ends and diseases of joints proper, and rightly includes both in his treatise. Internal derangement of the knee-joint is also dealt with.

Mr. Daniel holds that all inflammatory joint diseases, including in this category the arthropathies of organic nervous disease, are of toxic origin, that complete rest is often to be avoided, and that the congestion method with which the name of Professor Bier is connected is in most cases the best means of treatment. He does not accept the usual classification of rheumatic joint diseases, and considers that there is no real dividing line between rheumatic and rheumatoid arthritis, but that they are both only stages of the same morbid process. To this part of his subject a good deal of space is devoted, and he prints in parallel columns his own views and those of Garrod and others. When we mention that twenty-one pages are devoted to this comparison, it will be evident that Mr. Daniel does not shrink from controversy.

As regards the treatment of typical tuberculosis of joints, he says: "It is my intention to confine myself chiefly to Bier's congestion hyperaemia and the technique most suitable for use with it." The student, therefore, must not turn to this book for information as to splints and instruments, but he will find in it a good description of the details of the Bier treatment and of the complications which may arise under it. The author shows a tendency to discard complete fixation, and to allow movement in some forms of the disease. Speaking of the ankle, he says: "We have been too long dominated by the plaster-of-Paris absolute fixation, etc., school of treatment." We cannot go all the way with Mr. Daniel in his advocacy of active and passive movements, but we cordially agree with his condemnation of forcible correction under an anaesthetic in the active stages, and with his preference of conservative over operative treatment.

The section on Pott's disease is practical, but some reference should have been made to the method of forcible correction, which after a great vogue some years ago is very properly almost abandoned nowadays, but which is occasionally useful in the treatment of paraplegia. We have failed to find any notice in the book of the therapeutic use of the tuberculins.

Some medical and surgical books have been read and re-read almost as much for the charm of their style as for the facts and theories contained in them. This book is not likely to come into that category. We are not squeamish, and would fain overlook the false concords between subject and predicate and the split infinitives with which the text abounds, but such a phrase as "to so sew the synovial membrane," is too bad to be passed over.

[2] *Arthritis: A Study of the Inflammatory Diseases of Joints.* By Peter Daniel, F.R.C.S., Senior Surgeon to the Metropolitan Hospital, Surgeon to the Gordon Hospital, Assistant Surgeon to Charing Cross Hospital. The Medico-Chirurgical Series, No. 3. Edited by James Cantlie, M.A., M.B., C.M.Aberd., F.R.C.S.Eng., Surgeon to the Seamen's Hospital Society, Lecturer on Surgery to the London School of Tropical Medicine. London: John Bale, Sons and Danielsson, Ltd. 1912. (Post 8vo, pp. 523, figs. 131. 12. 6d. net.)

UROLOGY.

NOT so long ago the operations on the genito-urinary organs were relegated to a diminutive chapter at the end of the textbooks, but now large textbooks appear and congresses are held for the exposition and discussion of urology. Dr. RUDOLF OPPENHEIMER,[3] in the preface to his textbook of operative urology, points out that hitherto no such work has appeared in the German language, or for that matter in French or English, in spite of the fact that urology has been recognized as a subject of increasing importance. The number of recognized urologists is, of course, limited, but so also is the material. In an average surgical clinic the urological cases are few, and cystoscopy and ureteral catheterism, with a view to renal operations, are performed in a somewhat haphazard and untrustworthy fashion. The diagnostic methods are so different that, in the author's opinion, they ought to be treated as a separate subject of study. He ventures further to suggest that in consequence such operations as lithotripsy, intravesical and intraurethral manipulations are not practised in most surgical clinics. If urological clinics proper cannot be established a closer association between urology, and surgery is, he urges, desirable.

The arrangement of the book follows familiar lines. A general part deals with methods of examination, preparation of the patient and of the operator, anaesthesia, and after-treatment. Then the genito-urinary organs are taken in order, beginning with the kidneys. Ureteral catheterism receives premier position as a method of separating the urines. At the same time, the mechanical separators of Luys and Cathelin are commended where the urethra is narrow, the bladder small, or the position of the ureters abnormal. Clinical methods—the subcutaneous injection of phloridzin with subsequent examination of one or other urine for sugar, and the intramuscular injection of watery solution of indigo-carmine in conjunction with cystoscopy—receive also favourable if not enthusiastic mention.

Nephropexy, as practised by the author, is done by partial decapsulation and suture of the true capsule to the cut edges of the abdominal muscles, the posterior suture passing round the twelfth rib so as to hook the kidney well up behind it. The musculature and skin are brought accurately together. The after-treatment is disposed of in four lines, the author vaguely recommending the patient to remain in bed from two to four weeks. The success of such a nephropexy presumes more faith in the substantialness of the kidney capsule than we are disposed to place in it.

The suprapubic route (*sectio alta*) is the method of attacking the bladder preferred. In the removal of tumours the author recommends visual inspection of the interior of the bladder rather than trust in sensations appreciated by the fingers. The transperitoneal method is, he thinks, useful only for tumours placed in the posterior wall reachable by pulling the bladder forwards. The difficulty of suture of the bladder wall so deeply placed is very great, and the bladder should, whenever possible, be sutured; it is done in two layers, taking the precaution to do the first row in Lembert fashion, so that no threads shall project into the bladder. Haemorrhage is the great bugbear of intravesical operations; it may require to be controlled by packing the bladder full of

[3] *Urologische Operationslehre.* Von Dr. Rudolf Oppenheimer in Frankfurt-am-Main. Wiesbaden: J. F. Bergmann; and Glasgow: Bauermeister. 1910. (Demy 4to, pp. 350. Mit 113 Abbildungen in Text und 12 zum teil farbigen Tafeln. 24s.)

gauze for forty-eight hours. The Freyer operation for enlarged prostate is accorded pride of place.

There are two features of Dr. Oppenheimer's book worthy of special mention—the bibliography and the illustrations. The author has adopted the plan of tacking on the bibliography at the end of the description of each operation; the references are so numerous that here and there the bibliography fills more space than the text. The illustrations are many and mostly life-size—the skin incision on Tafel II is actually 7 in. long diagonally across the page—and seem to have been drawn and painted by the artist with a full brush. The realistic effect of these pictures is startling.

We are glad of the opportunity of bringing this book to the notice of urologists in this country; they will find the trouble of reading some rather difficult German amply repaid by the abundance of good thoughtful material in the book.

PUBLIC HEALTH IN THE UNITED STATES.

THOSE who desire a closer acquaintance with public health administration and with the sanitary condition of the United States of America will be well repaid by a perusal of *Public Hygiene*,[4] by Dr. THOMAS BLAIR, who asserts that the work is the result of a desire to make a personal investigation of public hygiene from the standpoint of a seasoned general practitioner of medicine. He has been assisted in his task by ten other doctors, none of whom appear, however, to be connected with the public health service, and by about an equal number of laymen. Many of the subjects dealt with are such as are not often to be found in works on hygiene. For example, the sanitary condition of hotels and lodging-houses and of railways is dealt with at considerable length. In some States, notably in Texas, there are very stringent laws with regard to the cleansing and disinfecting of railway carriages, and detailed regulations are in force with respect to the methods and regularity of the cleansing. At present each State makes its own public health laws, and these differ in stringency in various parts of the country. In these circumstances it is not surprising to find a strong plea put forward by Dr. J. B. McAlister for a Federal Bureau of Health. No Cabinet Minister has any direct responsibility for the health and life of the people. The only federal guardianship is vested in the United States Public Health and Marine Hospital Service, which is under the control of the Treasury Department, the Secretary of which is described by the author as the chief medical officer of the United States. A Department of Public Health at Washington, it is contended, with the power and wealth of the Government at its back, with laboratories the equal of any in the world, and with a corps of research workers engaged continually in searching out the cause and prevention of disease, would make it equal to any function of the Government.

The favourable opinion which we formed of Dr. CHARLES HARRINGTON'S *Manual of Practical Hygiene* has been maintained after a perusal of the fourth edition.[5] Owing to the death of Dr. Harrington the revision of the work has been undertaken by Dr. Mark Wyman Richardson, Secretary of the State Board of Health of Massachusetts, who has brought to bear on his task a considerable amount of industry and an intimate knowledge of his subject, together with an acurate acquaintance with the public health literature, not only of America and of Britain, but of the European continent. Nearly one-third of the volume is concerned with foods, their composition, nutritive value, methods of preservation, adulteration, and the processes by which adulteration can be detected. The author is in agreement with many other public health administrators that an objection to the commercial pasteurization and sterilization of milk is that these processes invite carelessness in the production and handling of milk, the acceptance of their necessity implying avoidable dirt and encouraging carelessness and negligence, the effects of which can be easily corrected by the application of heat before distribution. Instead of such encouragement there should be a general movement against the existence of antecedent conditions which make this after-treatment necessary. It appears that in Massachusetts the sale of milk which has been heated higher than 167° F. is contrary to law, unless the vessel in which the milk is sold is plainly marked "Heated Milk." In the chapter on disinfecting, the germicidal properties of formaldehyde are discussed at some length, and a clear description of Trillat's autoclave and of Lentz's regenerator is given. Although it is clearly laid down that it is futile to attempt to disinfect the air of a sick room except by sunshine or fresh supplies of air, the author expresses the opinion that formaldehyde gas approaches more nearly the requirements of the ideal disinfectant than any other. No very definite opinion is expressed as to the much debated question of aërial infection as opposed to contact infection, though it is a little startling to find the statement that the morbific agent of scarlet fever resides in the fine particles of epidermis which are continually cast off by the skin. In connexion with the infection of tuberculosis, reference is made to the experiments conducted by Dr. J. H. Hance at the Adirondack Cottage Sanatorium, where every care is taken that the sputum shall be disinfected. Guinea-pigs inoculated from the dust obtained from the buildings occupied by patients died of other infections on the third to the sixth day, but five of the ten inoculated with dust from the oldest cottage, which was occupied by a man who had been complained of for promiscuous spitting, became tuberculous. This supports the view, in the author's opinion, that dust in the air is of secondary importance when all possible sanitary measures are taken with regard to the destruction of the sputum. Although the work is intended primarily for American readers, it contains such a large amount of reliable information that it could not fail to be useful to those who are engaged in the public health service elsewhere.

DUTY AND DISCIPLINE.

THERE appears to be a widespread and rapidly increasing conviction that this country stands at present in a physical, if not a political, sense on the down grade. In spite of the immense improvements in sanitation and hygiene, the better food, better housing, and higher standard of living in every class of society; in spite, too, of the modern cult of health and the craze for athletics and physical culture, the Briton of to-day undoubtedly compares very unfavourably in many respects with his hard-hitting, hard-living ancestors; and the reason is not far to seek. It lies in the different training of the children. If, as a nation, we are less hardy and less vigorous than our forefathers, it is because the present generation of children lack what M'Andrews rightly considers the crowning virtues of his well-loved engines, "Law, Order, Duty an' Restraint, Obedience, Discipline," and this through no fault of their own, but in consequence of a defective and ill-judged upbringing. The iron discipline of former days, barbarous as it seems to us, at least had the merit of fostering the virtues of courage and endurance, but modern education, combined with the universal loosening of the bonds of discipline and the complete absence of restraint in the homes of rich and poor alike, is sapping the strength and vitality of a once virile nation, and breeding a generation of weak, neurotic, pleasure-seeking men and women who are wofully lacking in the very qualities which were once the glory of their race. The *joie de vivre* as interpreted by lovers of inglorious ease and constant amusement has taken the place of the *certaminis gaudium* which played a large part in the foundation and increase of our empire. It is to call attention whilst there is yet time to this evil, and to check its growth, that a new and fifth edition of *Essays on Duty and Discipline*,[6] has been published by Messrs. Cassell and Co., under the auspices of the "Duty and Discipline Movement," a body formed for the purpose of rousing the nation to a sense of the danger in which it now stands. The volume contains forty excellent essays contributed by a number of well-known and distinguished persons, including Field-Marshal Earl

[4] *Public Hygiene*. By Thomas S. Blair, M.D., Harrisburg, Pennsylvania, assisted by numerous contributors. Two vols. London: Rebman, Limited 1911. (Roy. 8vo, pp. 644; 153 illustrations. 42s. net.)

[5] *A Manual of Practical Hygiene*. By Charles Harrington, M.D. Fourth edition, revised and enlarged by Mark Wyman Richardson, M.D. London: Henry Kimpton. 1911. (Royal 8vo, pp. 850; 12 coloured plates, 124 engravings. 21s. net.)

[6] *Essays on Duty and Discipline*. A Series of Papers on the Training of Children in Relation to Social and National Welfare. London and New York: Cassell and Co., Ltd. 1911. (Crown 8vo, pp. 522. 3s. net.)

Roberts, Lieutenant-General Sir R. S. S. Baden-Powell, Cardinal Bourne, the Archbishops of Armagh and Dublin, the Bishops of London, Durham, and St. Albans; Prebendary Carlile, the Earl of Meath, the Head Master of Eton, Mr. Horace Smith, J.P., Mr. J. St. Loe Strachey, Raymond Blathwayt, and the late Professor Friedrich Paulsen. It is a significant fact that, though differing widely in their religious and political opinions, each of these writers agrees that the days of Britain's greatness are numbered if the rising generation is not saved from the well-meant but mistaken kindness of sentimentalists. No sane person nowadays would urge a return to the Spartan methods of bringing up children which found favour in the good old days; but it is undeniable that some sort of change is needed if we wish "that Our House may stand together and the pillars do not fall." Several of the contributors to the *Essays* do not hesitate to advocate conscription as a means of rectifying the errors of the weak-kneed sentimentality of modern humanitarians. This sentimentality has encouraged the growth of hooliganism and helped to swell the ranks of crime; and it is, indeed, high time that the far-reaching evils of a lawless and undisciplined childhood and youth were more fully recognized. The volumes will have fulfilled a most useful purpose if they succeed in bringing home to parents the truth of the great fact that the future of the race lies in the hands of their children, who for their own sakes must be taught to

> Stand to your work and be wise—certain of sword and pen,
> Who are neither children nor gods, but men in a world of men.

NOTES ON BOOKS.

EVER since the year 1892 fresh editions of *Materia Medica, Pharmacy, Pharmacology, and Therapeutics*,[1] by Dr. HALE WHITE, have been appearing at intervals of somewhat less than two years, and this fact sufficiently proves the popularity of the book. The latest issue, the twelfth edition, contains a certain amount of new matter, but in other respects closely resembles all recent predecessors. The outstanding feature is the great number of remedies noticed, some being included whose presence, in the absence of more familiar examples of the same general class, might not have been expected. The question of the use of alcohol is treated at considerable length, and in a fashion which, on the whole, leaves an impression in its favour. An improvement in the book would be greater accentuation of the possible dangers attending the use of some of the modern hypnotics.

No profession has so many subdivisions as medicine; in none is progress more active, nor in any is the real or imaginary need for new phrases to cover fresh ideas more promptly met. Unfortunately, however, the terms resulting are by no means always self-explanatory, sometimes because they are too strangely compounded to be comprehensible to any but their authors, sometimes because they relate to facts or theories unknown save to other laboratory workers. For this reason there is ample excuse both for the publication of medical dictionaries and for constant new editions thereof. Hence a frank welcome may be accorded to the seventh edition of the *Pocket Medical Dictionary*,[2] by Dr. W. A. NEWMAN DORLAND. It is based on the larger work by the same author, and, despite the short period which has elapsed since its predecessor appeared, contains some hundreds of new words. Nevertheless it remains of convenient size, and will doubtless prove equally satisfactory in use. Even greater compactness could be attained by omission of the lengthy and somewhat superfluous tables setting forth the doses of drugs used in human and veterinary medicine.

In his essay on the significance of the mechanics of development for physiology[3] Dr. ERNST LAQUEUR raises objection to the employment of teleological exceptions, and argues that the physiologist should endeavour to interpret all vital phenomena in terms of the exact sciences of physics and chemistry. The body is self-regulated by co-ordination of its chemico-physical constituents. In illustration of this principle the author collects interesting facts from the experimental work of embryologists, recent investigations of the development and regeneration of the "neuron," and the study of internal secretions, including Starling's work on "hormones." His data are well put together, but are expressed in a pompous, quasi-philosophical fashion which betrays ignorance of that art of eloquence which especially appeals to scientists—the art of making facts speak for themselves.

It is a curious fact that although as a nation we are reputed to consume more sugar than the inhabitants of any other country in the world, this is the only country in Europe (with the exception of Norway) which does not cultivate beetroot for the manufacture of sugar. From time to time attempts have been made to introduce the sugar industry into Great Britain, but these experiments have hitherto been unsuccessful, unless that which is at present in progress in the eastern counties be an exception to the general rule. In view of the recent proposal on the part of the Anglo-Netherland Sugar Corporation to erect a sugar factory in Norfolk, Mr. J. W. ROBERTSON-SCOTT (better known, perhaps, under his pseudonym of "Home Counties") could hardly have chosen a more opportune moment for the publication of his admirable volume on *Sugar Beet*.[4] His book contains an interesting and comprehensive account of this important industry; and being furnished with a number of tables, diagrams, and photographs, should prove a valuable guide to those who are endeavouring to develop beet growing in England.

[1] *Materia Medica, Pharmacy, Pharmacology, and Therapeutics.* By W. Hale White, M.D.Lond., M.D.Dub.(Hon.). Twelfth edition. London: J. and A. Churchill. 1911. (Fcap. 8vo, pp. 703. 6s. 6d. net.)

[2] *Pocket Medical Dictionary.* By W. A. Newman Dorland, A.M., M.D. Seventh edition, revised and enlarged. London and Philadelphia: W. B. Saunders Company. 1911. (Fcap. 8vo, pp. 643. Price 5s. net.)

[3] *Bedeutung der Entwicklungsmechanik für die Physiologie.* Von Ernst Laqueur. Jena: Gustav Fischer. 1911. (Roy. 8vo, pp. 38. M.1.20.)

[4] *Sugar Beet.* Some Facts and Some Illusions. A Study in Rural Therapeutics. By "Home Counties". (J. W. Robertson-Scott). London: H. Cox. 1911, (Demy 8vo, pp. 442; illustrations 109. 6s. net.)

MEDICINAL AND DIETETIC PREPARATIONS

Colloidal Metallic Solutions.

WE have received from Messrs. Oppenheimer, Son, and Co., Limited (179, Queen Victoria Street, London, E.C.), specimens of colloidal solutions of mercury and silver which they are supplying under the names Collosol Hydrargyrum and Collosol Argentum.

Collosol Hydrargyrum is a brownish opalescent liquid of slightly alkaline reaction: our tests showed that no precipitation was caused by boiling it, and on evaporation to dryness on a water bath the residue dissolved easily on again adding water, the solution, however, being no longer opalescent but clear. A portion of the dry residue gave on ignition the odour of burning albuminous matter, showing that the protective colloid used to prevent the mercury being thrown out of solution is of nitrogenous nature. The liquid was blackened by hydrogen sulphide, but no precipitate was formed; metallic copper immersed in the solution gradually acquired a coating of mercury.

Collosol Argentum is a red-brown opalescent liquid and contained a small deposit which consisted principally of silver chloride. Boiling the liquid increased the opalescence to a turbidity, but on then filtering through a paper of close texture nothing solid remained on the filter. Sodium chloride caused no change in the solution, and even hydrochloric acid only slightly increased the opalescence. On evaporating to dryness on the water bath and again taking up the residue in water, some finely-divided silver chloride remained undissolved; on igniting a portion of the residue the same odour was obtained as from the mercury preparation.

Both solutions are intended for use by hypodermic injection or for administration by the mouth, and it is stated that they are alterative, antiseptic, and bactericidal.

WE learn from the *Boston Medical and Surgical Journal* that, according to a statement issued on January 1st by the American National Association for the Study and Prevention of Tuberculosis, a total sum of £2,900,000 was spent in the United States during the year 1911 in the effort to control and eradicate tuberculosis. Of this, £2,360,000 was spent for the cure of consumptives in hospitals and sanatoriums, and the remainder for anti-tuberculosis organizations, dispensaries, boards of health, and other agencies. The largest amount appropriated in any single State was £710,000 in New York; Pennsylvania came second with about £600,000, and Massachusetts third with £221,600. Appropriations of over £2,000,000 have already been made for 1912 by various State legislatures and other public bodies.

Nova et Vetera.

MODERN FAITH HEALING.

F. ANTON MESMER.

(Concluded from page 201.)

THE Royal Society of Medicine presented a report to the same effect as that of the Commissioners.* The Government was so impressed by the dangers of animal magnetism that it took steps to make the reports as widely public as possible. More than 20,000 copies were printed by its orders, and distributed in France as well as in foreign countries.†

OBJECTIONS TO THE REPORT.

Objections were made by some to the report on various grounds. For one thing it was said that Franklin, being then unwell, had not been able to be present at the experiments. It is proved, however, by the report itself that he was only confined to the house by attacks of gout, and that the Commissioners had often carried on their inquiries there in his presence. It was also proved that he submitted to attempts to magnetize him, but, as might be expected, to no purpose. Another objection was that the Commissioners did not inquire into the method of Mesmer, but into that of d'Eslon, who did not know his procedures. This objection was anticipated by the Commissioners, and, as has been seen, was replied to in the Secret Report. D'Eslon was a Doctor-Regent of the Paris Faculty, and was initiated into the inner mysteries of the "discovery" by Mesmer, who at first often spoke of his honesty and candour, though after they quarrelled he denounced his favourite pupil as an impostor. Moreover, Berthollet, the famous chemist, was asked by the Duke of Chartres to attend Mesmer's performances in order that he might give an account of the procedure. He received detailed instructions from Mesmer himself, and operated according to his principles on a great number of persons, particularly the poor people who followed the treatment. He published a declaration in which he expressed the opinion that the whole thing was quackery.

The Commissioners have been criticized for not taking into consideration the alleged therapeutic effects of animal magnetism. That this objection is unfounded is shown by their report, in which they say that while it is always difficult to form a judgement as to the value of a particular remedy the reality of which there is no doubt, it is obviously impossible to estimate the effect of an agent which does not exist. Besides, Mesmer himself had put himself out of court, as we have seen, by refusing to submit anything but testimonials. Again, he had himself admitted that cures prove nothing.

It has already been stated that Mesmer was induced to promise to reveal the whole secret of his method to inquirers who would subscribe 100 louis each. He deputed the task to adepts who were supposed to have been initiated by the master. Chief among them were Eprémeuil and Bergasse. They gave theoretical courses of lectures to the subscribers, which served as an accompaniment and explanation of the medical treatment to which it may be said not only sufferers but the public were admitted. But the adepts had to confess that the inner mysteries had not been revealed to them. It should be stated that no sufferers from diseases repulsive in themselves or disagreeable to the spectators were admitted to the privileged circle round the tub. Mesmer would not allow an unhandsome disease to come between the wind and the nobility of his fashionable *clientèle*.

TESTIMONIES.

Is there any evidence that Mesmer ever cured organic disease? That he produced nervous "crises" is unquestionable, but these were only manifestations of hysteria similar to those seen in the *convulsionaires* round the tomb of the Deacon Pâris.‡

There were not a few, however, who believed that real cures were wrought by means of magnetism. Among these were members of the medical profession. It is impossible at this time of day to examine all the testimonies critically, but a glance at some of them will be sufficient to show what value is to be attached to this evidence. It is fitting that the first witness called should be d'Eslon,§ to whose testimonies special interest is attached, as he was for a time closely associated with Mesmer.‖

The beginning of his acquaintance with the Master was accidental. Chance made him acquainted with some among Mesmer's patients whose integrity could not be suspected. While he was visiting a sick person one day Mesmer came in. After the ordinary exchange of civilities Mesmer spoke to the patient, and, to d'Eslon's great surprise, the latter had a violent crisis. His eyes wandered, his chest heaved, his voice and respiration failed, the attack ending in profuse perspiration. D'Eslon, after keeping silence for some time, told Mesmer that he was a physician. He showed no sign of embarrassment, though he received the intimation rather coldly. In the course of conversation, however, Mesmer showed a knowledge of medicine which d'Eslon would have liked to possess. From that time he frequently saw Mesmer, who taught him that as there is one nature, one life, one health, there is only one disease, one remedy, one cure. It is as simple as the system by which Sangrado taught Gil Blas the whole art of healing at once. Mesmer cured only by the aid of crises, that is to say, by seconding or provoking the efforts of Nature. Hence, says d'Eslon, it follows that if he has to treat a madman he cures him by bringing on attacks of madness. Hysterical people will have attacks of hysteria, epileptics will have epilepsy, and so forth. He does not say that if a person has, say, a tumour of the leg he will cure it by causing convulsions in the limb, or by using means to stimulate the growth. On Mesmer's theory he ought to have cured the "obstructions" which were at the bottom of all disease by making them worse before they got better. In reading d'Eslon we are forced to the conclusion that he was honest; but it might be said of him, in the words of Autolycus, that "Honesty was a very simple gentleman." He speaks of four children, of 2, 5, 11, and 12 years old, treated by Mesmer. The first was blind from birth. Sitting on a chair he fixed his little hands to a conductor, and there during two or three hours he "gaily" passed his time applying the end of the rod first to one eye and then to the other. An ordinary child would certainly have put the rod into its mouth.

"This interesting creature flatters itself in baby talk that it will see clearly later. Alas! the poor child does not know what it is to see and it is to be feared that it will never know." There is no mention in this case of a crisis, which we have been told is the necessary means of cure. D'Eslon goes on to relate a case of what he calls latent cancer:

> An unmarried woman, aged about 35, had noticed for some years a painful tumour in the lower part of the left breast. She used various remedies without success. Glands enlarged around and at the upper part of the breast which joined and the swelling is nearly bursting the skin. Two painful prominences of leaden colour joined the first, and the nipple retracting formed a blackish circle. It was the seat of stabbing pains. Afterwards the right breast became swollen, with glands scattered round the enlargement. The patient's health was undermined; walking caused great pain, driving was unbearable. She could not lie down in bed, but sat up and got neither sleep nor rest. There seemed to be no alternative but amputation. Mesmer undertook the case. When d'Eslon examined the patient he agreed that if Mesmer prevented the breast from ulcerating he would have wrought a wonderful cure. But he did much more than this, as the patient was infinitely relieved, the outlying glands disappeared, the principal one considerably diminished. The pain became endurable, sleep returned; the woman walked and drove and was altogether in a state which he had not dared to hope for.

It will be noticed that this is not a cure, and, indeed, d'Eslon himself admits this, but he speaks of the consoling effects of the magnetism, and of the hopes it inspires! Time alone can tell, he says oracularly, what will happen. Unfortunately, we hear nothing more about the patient, as is usually the case in these records of wonderful cures.

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* See BRITISH MEDICAL JOURNAL, January 13th, p. 79, and January 20th, p. 133.

† *Biographie Universelle*, vol. xxviii.

‡ See BRITISH MEDICAL JOURNAL, November 27th and December 4th, 1909.

§ It may be noted that this physician's name is spelt "Deslon" by the Commissioners and "d'Eslon" by himself. We have here followed his own spelling, thus giving him the *particule nobiliaire*.

‖ *Observations sur le magnétisme animal*. Par M. d'Eslon, Docteur Régent de la Faculté de Médecine de Paris, and Premier Médecin Ordinaire de Monseigneur le Comte d'Artois. A Londres, et se trouve à Carlsruhe: Chez Michel Macklot, Libraire and Imprimeur de la Court. 1781.

Another case related is that of a girl of 16, who had been epileptic either from birth or early childhood. She was treated by Mesmer, but was obliged to leave him when he determined to treat nobody in Paris. When he returned she came back to him. D'Eslon can say nothing about the beginning of the disease, but he learnt from trustworthy persons that she had so many fits that she was an object of compassion. Magnetism first, he was told, gave her the advantage of foreseeing her attacks. Then, as he witnessed for himself, they occurred only as crises, hastened by magnetism, and ceased in the intervals. He had seen very violent crises, but they gradually became so much milder that the patient had only to lean her head on the back of her chair, and remain in a fainting state some seconds when she came quietly to herself.

It is significant that her relations took her away. D'Eslon says it is regrettable that this experiment was not pushed to its last stage, as there still remained a "remnant of crisis," and the nature of the disease was such that one might have given it more careful attention.

Another case was that of a man who suddenly became paralysed over one half of his face. He went to Mesmer, and four days afterwards the paralysis had disappeared.

Here, says d'Eslon, is a cure which he hopes will be generally satisfactory. Nevertheless, Mesmer professed to think little of it. He told the patient that he had a very serious symptom, but only because he was vaporous, and he was vaporous only because he was "full of obstructions." He advised the patient to have himself treated more freely, but apparently the advice was not followed.

D'Eslon himself was a patient of Mesmer. He says that for ten years he had been subject to a pain in the stomach, caused by an obstruction in the small lobe of the liver. This frequently caused him inconvenience. On certain days he was obliged to undo the buttons of his waistcoat, in order to breathe easily and without pain. Now, he says, he can strike his stomach without ill effect. He had, besides, headache and a continual feeling of cold about the right temple.

He spoke to Mesmer about these annoyances, and the prophet several times endeavoured to exorcise them by playing the harmonica or pianoforte *at them* (*en leur faveur*), but each time d'Eslon was obliged to ask to be excused the music! This reminds us of the patient who complained that the thermometer in his mouth took so much out of him. He told Mesmer one day that he would be treated if he had the time. Mesmer suggested that he should take his place daily among the patients. "If your cure is not complete you will get a half, a quarter, or an eighth. It will always be so much to the good." The good simple d'Eslon followed this advice, and as a result he had his crises, his evacuations, his forehead peeled, and his pains in the liver and his headaches were much relieved. D'Eslon adds that his case must not be counted in the number of cures. Mesmer himself proved to him that he could not be radically cured, and his reasons seemed to him to be sound. Doubtless they were, though we should like to know something more definite about them.

We next have Mesmer himself in the character of a patient. He felt a general malaise, which lasted several days. This led him to examine himself with care. Naturally, too, he found himself "full of obstructions" (*rempli d'obstructions*). Acting on the precept, "Physician heal thyself," he subjected himself to his own treatment. D'Eslon says oddly that doubtless he treated himself as a friend, for in the space of one month he had four or five hundred evacuations. Vigorous as Mesmer was, it seemed to d'Eslon that he was fatigued, and no wonder. Even a "superman" could scarcely bear thirteen to sixteen evacuations a day for a month without feeling some effect. Mesmer, however, was pleased at the result, saying he had had a narrow escape, and congratulated himself on having taken the ill in time. D'Eslon saw Mesmer have recourse to magnetism afterwards, but only for two or three days. Probably his first experience was enough, or the effect was lasting.

D'Eslon only saw Mesmer treat two cases of acute disease. When Paris was devastated by influenza in 1780 a patient of Mesmer's who had a delicate chest got pneumonia. He was very ill one night, and sent for Mesmer, who would do nothing till the following day. Then the disease was well marked. He had the patient bled—[Here there is a note stating that Mesmer allowed bleeding and emetics, not as remedies, but as means of clearing the primae viae when they were too clogged. D'Eslon had seen him use bleeding, but not emetics, twice in one day.]—and ordered him to drink lemonade. This régime seemed to d'Eslon so extraordinary that he ventured to express his alarm to Mesmer. There would seem to be nothing very alarming in drinking lemonade, and it is not surprising to hear that Mesmer replied in a reassuring tone. The following morning the question arose of a further bleeding. Mesmer doubted whether it was necessary, and d'Eslon thought it very dangerous. Nevertheless, the patient was bled, and lemonade was again given to strengthen him. D'Eslon was anxious; "Always lemonade," he said to himself, anxiously. Truly a very simple gentleman! In the evening Mesmer treated the patient during three-quarters of an hour, and lay down beside him on the bed. An hour later he asked, "Well, my friend, how goes it?" The reply was: "I am pouring with sweat; drops of water are running from my forehead." "All is well," was the reply, "you must drink lemonade"; and the patient drank lemonade. The illness had begun on Thursday. On the following Monday the family, having been informed of the danger, arrived in a state of extreme anxiety. The patient went to meet them, assuring them that he was cured. This strange eventful history ends with the statement that it may be said there was no convalescence.

Another patient, a girl aged 21, had a malignant fever with delirium. The symptoms increased in intensity to the twenty-third day. Mesmer then went to see her. After half an hour she recovered consciousness and asked what had been done to her. D'Eslon replied that no harm had been done. Passing her hand from the top of the chest to the lower part of the stomach, she said, "It is not that. On the contrary I felt as if some one took my disease in his hand and put it away from me." At Mesmer's suggestion she was given lemonade, cream of tartar, and other mild acids. Her consciousness remained, the evacuations were established, and remained regular, and after a short convalescence she was perfectly cured. Eight or ten days after the use of the magnetism she was in perfect health and able to go home.

Here d'Eslon states that a physician said to Mesmer in his presence that he might be wrong in attributing to magnetism the effects felt by the patients since he employed other well-known remedies such as cream of tartar. He does not know if the objection in itself displeased Mesmer, or whether it was the tone in which it was expressed, but he answered sharply, "That is true, sir. I also order them chickens and salad. Now that you know my secret you can use it, and I have no doubt that you will work marvels." Here Mesmer would appear to have lost his temper, and it might well have been retorted to him that chicken and salad would have been just as effectual as his magnetism.

Mesmer was asked if his cures would be permanent. His reply is given as follows:

Two classes of citizens can ask that question—the medical public and the non-medical public. To the doctors I answer: Either I cure radically or you never cure so, for animal magnetism does not operate except by crises, expectorations, evacuations, sweating, and similar means. Now, if you take that away from medicine, you know well that there would be no such thing as medicine. As regards the non-medical public, this answer is not sufficient. It must only know by experience. Therefore, I ask for nothing else than to be put to the test, and that the public may be assured that it is not deceived I am very anxious that the Government should protect, examine, and cause to be examined, the after-effects of my operations, so that neither I, nor the others, may abuse the public confidence.

It would seem difficult, says d'Eslon, to use more peremptory language. It may be observed, however, that what is wanted is something more than peremptoriness. All quacks are peremptory. But they are chary in the production of proof. They challenge examination, but it must only be under conditions laid down by themselves, and these conditions do not afford any warranty that the test shall be scientific or that grounds of proof shall be forthcoming.

Mesmer, continues d'Eslon, said sometimes that his agent is so common and so near us that when the time had come to make his discovery public people would be surprised by its extreme simplicity. Many people are still surprised, not only at the simplicity of the method but at the extreme simplicity of those who look upon it as something mysterious and wonder working.

D'Eslon writes as an enthusiast, and the exuberance of his style does not excite confidence. He admits, however,

that he had never been a witness of any miracle. But he confesses that if such a thing had happened he was the man that would testify to it without hesitation. He adds, "Incredulity or levity would exhaust themselves uselessly in jests and sarcasm; in vain would people cover me with ridicule; I should think I had answered everything in saying, 'I have seen it.'"

We have thought it well to give d'Eslon's evidence pretty fully, because it enables the reader to estimate his power of judgement and the value of his statements.

Next comes Dr. Thouret, another Doctor-Regent of the Paris Faculty, but a man not so credulous as d'Eslon. He shows that Mesmer did not limit his treatment to the production of "crises." *

In addition to the magnetic ritual which has been described, Mesmer acknowledged the usefulness of some internal remedies, cream of tartar being the drug which he employed by preference. In certain circumstances he used baths, bleeding, and purges. He condemned the use of the cautery, however, and the methods of treatment which he used as adjuvants of magnetism were mild and agreeable. Sweating was recognized as a medium for the action of animal magnetism, and means were recommended to stimulate the secretion. The greatest cleanliness of body was enjoined. Tobacco was forbidden, and the care of the mouth, nails, and hair was insisted upon. He recommended amusement, and took parties of patients out of town, giving them the opportunity of enjoying all the pleasures of the country in selected houses. Thouret hints that his stay at Creteil had no other motive. Moreover, the exercise involved by the necessity of the patients going to his house once or twice a day, and the distraction of seeing each other around the tub, must be reckoned as factors.

Besides all this, Mesmer played the harmonica with great skill in such a way as to touch the emotions; in this way he found out who were most susceptible and had the most excitable nervous system. There was also an orchestra which played soft airs while the magnetic rites were being performed around the mystic tub. It was especially people suffering from a sluggish stomach who derived benefit. Persons who had neither the heated imagination nor the excitability of nerves favourable to the action of magnetism were declared to be "anti-magnetic."

Thouret points out that the repeated crises which occur during treatment are not devoid of danger. The women say they are better afterwards, but it is only for the moment. Many doctors—trained observers who have followed the treatment—regard these convulsions as possibly very injurious. He thought Mesmer had founded his procedures on those of Gassner, giving them a form more suited to the age and his nation.

Valleton de la Boissière, a doctor of Bergerac, came forward to refute Thouret.† He published a number of testimonies:

Among the deponents are Brother Simon de Turin, a Capuchin of the Great Convent of Nantes, aged 83, subject for several years to giddiness and frequent headaches, followed sometimes by fainting and suffering sharp pains and a great weakness in the hips and legs which made him unable to walk except with the aid of a stick. After a month of magnetic treatment administered by M. Boissière, a disciple of M. Mesmer, he could dispense with his stick, had a good appetite, and slept well. The headaches, however, had not entirely ceased.

Then there was M. de Limelle de Bouvrage, who for a year suffered from ague, with "obstructions of the liver and spleen" and a disgust for food. After two months of magnetic treatment he got rid of the obstinate fever, the stomach did its work satisfactorily, and his bowels had become regular. He further attested that his daughter, aged 10 years, having also had ague for two years, had been perfectly cured by the same treatment. He declared that: "Assuredly if she and I owe so happy a change in our state to imagination, touches and imitation, blessed for ever and praised be the inestimable inventor of these three delightful methods, certainly far preferable to the b tter and detestable potions with which we have vainly and for so long a time inundated our stomachs."

This is an echo of the words of d'Eslon in his *Observations sur le magnétisme animal*: "If the medicine of the imagination is the best, why should we not avail ourselves of it?" It may be remembered that he recognized before the Commission that the imagination played the largest part in the effects of magnetism, and he added that this new agent was perhaps nothing else than the imagination itself, the power of which was as great as it was little known.

Another case was that of a little girl aged 5, with fever following a chill and bilious diarrhoea. She was from the first treated with magnetism; on the fourth day she was given 6 grains of ipecac., and the next day the fever had gone. There is nothing here but the natural course of a slight fever. She was further treated for three months for enlarged glands in the neck following small-pox, which are said to have yielded to the action of the magnetism, which in this case was doubtless the action of time. She and her father afterwards had measles, from which they recovered without any treatment but magnetism.

These cases would doubtless have done as well with Gull's famous mint water prescription.

Among the other cases related by Boissière are the following: A woman for fourteen months had a tumour of about the size of a pigeon's egg; it was resistant, uneven, and slightly painful. It was entirely dissipated by magnetism, concurrently with an application of hemlock. From this case it is impossible to draw any conclusion as the details given are meagre.

A girl for two years was subject to convulsive movements over the whole body. She was never at rest even in sleep. She fell about, broke things, and could do no work. She had to be made to drink by force, she was extremely thin and of a yellowish colour. She had, of course, consulted the best doctors and used all sorts of remedies. Her chest had become affected. Despairing of cure she submitted to magnetism and had crises nearly every day, sometimes at home. Insensibly the convulsions became less strong and less general, and after four months of treatment she was radically cured.

Boissière says that magnetism helps Nature and hastens its operation in all diseases, especially in small-pox. Then we have reports of cases of rheumatic pains, indigestion, deafness, scrofulous ulcers of malignant character in the groin, diseased bone, and so on through a series of patients suffering from "obstructions" of the liver and spleen, with headache, billiousness, and so forth. A case of hip disease, with discharging sinuses, is recorded, in which a perfect cure was effected after ten months and a half of treatment. The diseased thigh was shorter than the other, owing to the different operations that had been performed. But this deformity is pronounced to be incurable even by magnetism. This cure, we are told, proves that animal magnetism has an action that would vainly be sought from ordinary treatment. This statement appears to prove that the worthy but credulous Boissière was somewhat ignorant of surgery. It is not altogether rare, however, even at the present day, for a cure due to the operation of time with the help of surgery, to be attributed to some miraculous agent or to some form of quackery.

In a *Supplément aux Deux Rapports de MM. les Commissionaires*, etc., over 100 cases intended to illustrate the effects of magnetic treatment are related. It is the familiar story of pains in the head, sciatica, convulsions, "paralysis," "rheumatism," "glands" in the breast, and especially "obstructions" of the spleen, and so forth, which figure so largely in all reports of Mesmer's "cures." "Obstruction of the liver" used to be said by Avicenna in his instructions to pupils to be a disease which would always satisfy the mind of an inquiring patient. It has now followed obstruction of the spleen into the limbo of those vague conditions which the physicians of old found so convenient. Another thing notable in these testimonials is the absence of a large number of common diseases—notably consumption and cancer—and the frequency with which a neurotic condition of the patient is either clearly manifest or may plausibly be conjectured.

The author of a frankly hostile work,‡ who appears to be thoroughly well informed, though some allowance must be made for his strong bias against Mesmer, cites a number of cases, with the names of the patients, which were claimed as cures by Mesmer, but which, he says—some-

* *Recherches et doutes sur le magnétisme animal*, par M. Thouret, Docteur-Régent de la Faculté, et Membre de la Société Royale de Médecine. Paris: Chez Prault, Imprimeur du Roi, quai des Augustins, a l'Immortalite. 1784.

† *Lettre de M. Valleton de la Boissière*, médecin à Bergerac, *à M. Thouret, médecin à Paris*; Pour servir de réfutation à l'extrait de la Correspondance de la Société Royale de Médecine, relativement au magnétisme animal. Cette Lettre est suivie d'un précis des cures opérées, à Nantes, par les moyens magnétiques. Philadelphie. 1785.

‡ *L'Antimagnétisme.*

times after a temporary subjective benefit remained as they had been before. Among these is the famous case of the Swiss man of letters—M. Court de Gebelin—who firmly thought he had found a healer in Mesmer, but who died in the prophet's house. Of him it was said in a contemporary epigram that *Il est mort guéri*. But on the body being opened it was found that there was organic disease of the kidneys, on which the magnetism had had no effect. There is nothing to be said about the cases related by believers but that they are of the same kind which make up the mass of cures wrought by faith healing. The explanation of these "cures"—even if it be granted that the facts were in every case accurately reported—had already been given by the Commissioners.

The End of Mesmer.

The reports of the Commissioners and of the Royal Society of Medicine had the effect of destroying the vogue of Mesmer. Some of his devotees, indeed, endeavoured to defend him, but Mesmer himself judged the situation more accurately, and soon afterwards left France. He carried with him the money of the subscribers, to whom he had not disclosed his secret; adding insult to injury, he accused them in a pamphlet of having robbed him of it. It is said that he spent some time in England under an assumed name. Then he went to Germany, where he published a new exposition, which was coldly received. He retired to Switzerland, and died in obscurity at Meersburg on March 15th, 1815.

Of his later days nothing definite seems to be known. A huge accretion of literature became incrusted around the subject of Mesmerism. Here and there we get glimpses of the man. Dr. Egg von Ellekon, who made his acquaintance in 1804, relates that he once asked Mesmer why he always ordered his patients to bathe in river and not spring water. The answer was, Because river water is exposed to the sun's rays. To this Dr. Egg replied, that he knew river water was sometimes warmed by the sun, but not so much that one was not obliged frequently to warm it still more; therefore, he said, he did not see why warm water should not often be preferable. Mesmer's answer must be quoted in his own words:

> Dear doctor, the cause why all water which is exposed to the rays of the sun is superior to all our water is because it is magnetized. Twenty years ago I magnetized the sun!

Egg describes Mesmer as an old man of a venerable appearance, talkative—especially on his own merits and discoveries—and, whenever the practice of magnetism was mentioned, assuming an air of mystery which repelled the honest inquirer. He was never tired of sounding his own praise, or of dwelling on the benefits which his magnetic discoveries had conferred on mankind. In his sitting room hung a picture in which he was represented as the good genius of the world, celebrating the triumph of animal magnetism over medical science. He was in the habit of presenting those who made his acquaintance with a print of himself under which were some French verses extolling him in the most fulsome terms. Like Mrs. Eddy and other prophets of new religions or systems, he was accustomed to speak with the greatest contempt of those who differed from or opposed him. He expressed the greatest indignation against more recent adepts in magnetism, whom he called "somnambulists," accusing them either of being unable to understand him owing to their stupidity, or of having betrayed him. He complained bitterly of the persecution he had suffered at the hands of the Faculty, and denounced doctors as poisoners. He said once to Egg that his "expectation" of life had been shortened by ten years because he had once been bled by a surgeon when he was young. Yet there is evidence that he himself used bleeding in certain cases in his practice. Midwives and man-midwives he classed with doctors as privileged murderers of mankind. Why his wrath was so fierce against these harmless necessary persons is not apparent. The tying of the umbilical cord he held to be the cause of small-pox and of all hepatic diseases, under which he classed almost every chronic malady. Outside his own theory, he knew and cared about nothing. His reading was confined to two or three newspapers; of the progress of science he was altogether ignorant, and even his political opinions were tinged by his peculiar views. He went so far as to advocate a political revolution and reorganization of society on magnetic principles. Are we witnessing the beginning of the triumph of Mesmerism in politics at the present day?

Mesmer, like Cagliostro and Saint Germain, made his appearance just at the time most favourable for the success of any prophet of the marvellous. It was an age when, as as Carlyle says, "riding on windbags will men scale the Empyrean."† Among these windbags he counts Mesmer.

"Or observe Herr Dr. Mesmer, in his spacious Magnetic Halls. Long-stoled he walks; reverend, glancing upwards, as in rapt commerce; an Antique Egyptian Hierophant in this new age. Soft music flits; breaking fitfully the sacred stillness. Round their Magnetic Mystery, which to the eye is mere tubs with water,—sit breathless, rod in hand, the circles of Beauty and Fashion, each circle a living circular Passion-Flower: expecting the magnetic afflatus, and new-manufactured Heaven-on-Earth. O women, O men, great is your infidel-faith! A Parlementary Duport, a Bergasse, D'Espréménil we notice there; Chemist Berthollet too,—on the part of Monseigneur de Chartres.

"Had not the Academy of Sciences, with its Baillys, Franklins, Lavoisiers, interfered! But it did interfere (August, 1784).

"Mesmer may pocket his hard money, and withdraw. Let him walk silent by the shore of the Bodensee, by the ancient town of Constance; meditating on much. For so, under the strangest new vesture, the old great truth (since no vesture can hide it) begins again to be revealed: That man is what we call a miraculous creature, with miraculous power over men; and, on the whole, such a Life in him, and such a World round him, as victorious Analysis, with her Physiologies, Nervous-systems, Physic and Metaphysic, will never completely *name*, to say nothing of explaining. Wherein also the Quack shall, in all ages, come in for his share."

COLLOIDAL SOLUTIONS AND ARTIFICIAL ENZYMES.

Among the many departments of scientific work in which the researches of recent years have led to notable progress, two which are of considerable interest and importance are the study of colloidal solutions and that of enzymes and enzyme action. These branches of investigation are not altogether independent of each other, and in particular they converge on questions of the chemistry of physiological processes. In this field it is claimed by some that the results already arrived at are of great importance to practical medicine, and it will not be out of place here to give a brief summary of this part of the subject.

The systematic study of colloids was first undertaken by Thomas Graham, and various papers on the subject were published by him in the years 1861 to 1864. In investigating the properties of substances in solution, Graham found that the bodies studied could be arranged in two classes, to which he gave the names *crystalloids* and *colloids*. The most characteristic and constant difference between them was that the former can diffuse, when in solution, through a membrane of parchment or similar material, while the latter cannot. The terms are still retained with the same general meaning as that given by Graham; but instead of considering crystalloids and colloids as different classes of bodies, investigation has shown that it is more correct to speak of the crystalloidal and colloidal states of matter, since a large and increasing number of substances have been obtained in both kinds of solution. Graham used the term *sol* to denote a colloidal solution, and this term is now in general use in this sense, such solutions being called *hydrosols* when water is the medium, *alcosols* when the solvent is alcohol, and, generally, *organosols* when the solvent is an organic liquid. The coagulated form of a colloidal substance is called a *gel*, and a gel formed from a hydrosol and retaining water is a *hydrogel*. A sol may be converted into a gel in a variety of ways, two of the most usual being the addition of an electrolyte and the application of heat; in some cases a reversal of the conditions restores the sol form of the colloid, but in other cases the gel cannot be redissolved by any such means. In accordance with their behaviour in this respect, colloids may be classified into reversible

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* *Animal Magnetism; its History to the Present Time. With a Brief Account of the Life of Mesmer.* By a Surgeon. Published by G. B. Dyer, 24, Paternoster Row, London. 1841.

† Carlyle, *French Revolution*, vol. i.

and irreversible, and the distinction is of some practical importance.

Some of the most interesting of the sols which have been studied in recent years have been those of the metals; gold, platinum, silver, mercury, and many other metals have been obtained in the form of hydrosols, while others, such as the alkali metals, have been obtained as sols in certain organic solvents. An impure sol of silver was prepared as long ago as 1839 by Wöhler, although its real nature was not understood by him; the method used in preparing it—heating silver citrate in a stream of hydrogen—gives substantially the same product as the "colloidal silver," or "collargol," which has found its way into medicine in recent years. Another metal which has found some therapeutic application in the form of a sol is mercury, and colloidal calomel is also employed. A more familiar example, now much less used than formerly, is the so-called "dialysed iron" (liquor ferri dialysatus), which consists of a hydrosol of ferric hydroxide. The addition to this of a very small quantity of sodium sulphate, or of some other salt having no *chemical* action upon it, causes "gelatinization" of the liquor, or, in other words, converts the sol to a gel; and the other sols just alluded to show a similar behaviour on the addition of a trace of an electrolyte. On the other hand, many of the common colloids only show reversible changes; a fairly strong solution of gelatin, for example, sets to a "solid" or a gel on cooling, but resumes the sol form on again raising the temperature; a large excess of salt will throw out the gelatin, but on washing away the salt it can be redissolved. An important fact is that in some cases if the sol of an irreversible colloid is mixed with the sol of a reversible one the mixture is reversible.

Colloids differ from crystalloids, not only in being non-diffusible, but also in the fact that they have no osmotic pressure, or almost none; hence the boiling and freezing points of the solvent are not altered by the colloid as they would be by the presence of a dissolved crystalloid. It is not possible at present to make positive assertions as to the actual condition in which a substance exists when in colloid solution, but a good deal of knowledge with regard to the matter has been gained in recent years by the use of the ultramicroscope in the form given to it by Siedentopf and Zsigmondy. A pencil of convergent rays of light is passed into the solution under investigation, and the path of the beam is examined, against a black background, with a strong microscope. In the case of a perfectly homogeneous liquid nothing is seen; the light passes without diffraction or reflection, and none of it, therefore, is diverted into the microscope. But if the liquid contains solid particles in suspension (which may be far too small to be detected by ordinary microscopical examination in a bright field), some of the rays will be scattered by reflection at the surfaces of the particles; if they are sufficiently numerous and of sufficient size, the amount of light so scattered may be sufficient to be perceived by the unaided eye and the path of the rays will then appear luminous; on examining it with the microscope the luminosity may be seen to be not continuous, but to proceed from numerous small particles, which reflect portions of the beam.

A good analogy is furnished by the familiar fact that if a pencil of rays of sunlight passes through a hole in a shutter into a darkened room in which the air is perfectly still and pure, the rays are invisible from a point at the side of their path, and are only perceived by the image formed on the opposite wall; but if the air has been recently disturbed the particles of dust floating in it scatter so much of the light that its path appears luminous from a little distance, while closer inspection shows the particles of dust as brilliantly illuminated objects, although they become invisible if light is freely admitted into the room.

If ordinary distilled water, even after filtration, is examined with the ultramicroscope, it is seen to contain numerous suspended particles, and it is only after standing undisturbed for weeks, in order that they may subside, that it is obtained tolerably free from them. If a colloid solution is examined with the ultramicroscope it usually shows numerous particles of varying sizes in active movement; in some solutions, however, only a general luminosity has been observed, discrete particles not being distinguishable. When particles are suspended in a liquid of greater or less density than themselves, motion is always observed, and has received the name Brownian movement. The movements to be observed in a colloidal solution with the ultramicroscope, however, have not the characters of the usual Brownian motion. Zsigmondy thus describes his first examination of a metallic hydrosol, in which he expected to see the ordinary Brownian movement of particles:

> How entirely erroneous was this idea! The small gold particles no longer float, they move, and that with astonishing rapidity. A swarm of dancing gnats in a sunbeam will give one an idea of the motion of the gold particles in the hydrosol of gold. . . . This motion gives an indication of the continuous mixing up of the fluid, and it lasts hours, weeks, months, and, if the fluid is stable, even years. . . . The smallest particles which can be seen in the hydrosol of gold show a combined motion, consisting of a motion of translation by which the particle moves from 100 to 1,000 times its own diameter in one-sixth to one-eighth of a second, and a motion of oscillation of a considerably shorter period, and on this account the possibility of the presence of a motion of oscillation of a higher frequency and smaller amplitude could not be determined, but is probable.

It is possible to arrive at approximate measurement of the particles thus rendered visible; in colloidal solutions their diameter is from 20 $\mu\mu$ down to about 1 $\mu\mu$ (1 $\mu\mu$ = one millionth of 1 mm.). They thus approach in smallness the limits which have been assigned from other considerations for the diameter of molecules. The motions which the ultramicroscope reveals are always going on, and were found to be undiminished after keeping for months. A statement of Graham's that "the colloidal is, in fact, a dynamical state of matter, the crystalloidal being the static condition; the colloid possesses Energia" is thus shown to be well founded.

Sols of metals may be prepared in several ways, one of the simplest being that introduced by Professor Bredig of Heidelberg in 1898, in which a current of electricity is passed between poles of the metal whose sol is required, below the surface of pure water. Some disruption of the metal of the kathode occurs, and the particles which fly off from it assume the colloidal state, the liquid becoming coloured after a short time and then consisting of a hydrosol of the metal. Sols of gold, silver, and platinum, containing about 0.004 or 0.005 per cent. of the metal, were so prepared, and the method has been modified and extended to other cases by Svedberg since 1905. The metallic sols so obtained are extremely sensitive to traces of electrolytes and to the influence of heat, the change to gels being irreversible. They possess some remarkable properties, before discussing which it will be necessary to refer to enzyme action.

The natural enzymes form a large group of bodies occurring in animal and vegetable organisms, characterized by having the power of inducing chemical changes in other bodies without themselves becoming changed; in other words, they are catalytic agents.

Various hypotheses have been put forward to account for catalytic action, but no one of them has been proved to be true to the exclusion of the others, and there is good reason to believe that the mode of action is different in different cases. One of the proposed explanations is that the catalyst acts by means of molecular vibrations; the molecules of the substance acted on are supposed to be already in a state of vibration, which becomes increased by sympathetic vibrations in the catalyst to such an extent that the vibrations pass the point of equilibrium, and the substance accordingly undergoes decomposition. According to another view, the substance acted on first forms a compound with the catalyst; then this compound breaks down more completely than merely into its two components, fresh products being formed, and the catalyst set free in its former condition. A third hypothesis is that the acceleration of a reaction caused by a catalyst is due to the altered solubility of the substance acted on, and to its having a different reaction velocity when dissolved in the medium *plus* the catalyst. Whatever the explanation of catalytic action may be, a remarkable fact about the organic catalysts known as enzymes is that the range of their activity is extremely limited, so that a given enzyme which can cause the decomposition of some one substance is often quite powerless to effect the similar decomposition of some nearly allied substance; in other words, their action is specific in a high degree. For

example, cane sugar is hydrolysed into glucose and fructose by the catalytic action of the enzyme invertase, which is unable to exercise a similar action on maltose (an isomer of cane sugar); for the corresponding hydrolysis of this the presence of another enzyme, maltase, is required. A few of the known enzymes can resolve a number of different bodies; thus emulsin induces the decomposition of any of the glucosides amygdalin, arbutin, helicin, salicin, phloridzin, daphnin, and others; but, as a rule, one enzyme can cause decomposition of one particular body and of no others, even stereo-isomerism being in many cases a sufficient difference, so that one of a pair of stereo-isomers is acted on by a given enzyme, while the other is not. Thus, whatever may be the mechanism of enzyme action, there must be some very close relation analogous to that between key and lock, between an enzyme and some grouping or structural arrangement in the molecule attacked.

Enzymes play an enormous part in the chemistry of the physiological processes of both plants and animals. That this is the case with the digestive processes has long been known, but further research has extended the observation to most of the chemical actions of living cells. This has necessarily meant a very large increase in the number of individual enzymes known; but it is probable that no enzyme has as yet been prepared in a state of purity, the fact that they are all colloids making purification extremely difficult, while it also makes the establishment of definite criteria of purity a much less easy matter than it is in the case of crystalloids. The fact that the natural enzymes are all colloidal substances leads naturally to the inquiry whether any other colloids, not produced by living matter as enzymes are, possess catalytic powers similar to those of the latter; and it is found that the simplest of all known colloids, the hydrosols of certain metals, possess in a high degree some properties resembling those of enzymes; and some enthusiastic workers on this subject have applied to them the names of "metallic ferments" or "artificial enzymes."

Although an enzyme has usually some specific and characteristic power of acting as a catalyst towards some one substance, many are capable of acting as catalysts towards certain other bodies also, the changes which result not being specific but being induced by many enzymes indifferently. The most general of such catalytic actions is that which causes hydrogen peroxide to break up into water and oxygen: the many enzymes capable of doing this are called peroxidases. This property is shared by the hydrosols of gold, silver, and other metals; but since the decomposition of hydrogen peroxide may also be induced by finely-divided metals in the solid state, such as platinum black, it must not be too hastily regarded as evidence of an enzyme-like nature in the sols. Another group of natural enzymes, called oxidases, are able to cause oxidation by means of the oxygen of the air, and some colloid mineral substances have been found to exhibit a similar action. Neilson has shown that colloidal platinum and platinum black are able to cause hydrolysis of starch and decomposition and resynthesis of fats. But no case appears to have been recorded in which an "artificial enzyme" has shown a specific power of catalytically inducing decomposition of only one substance, or even a small group; on the contrary, their catalytic power is always far more general than that of natural enzymes.

A striking similarity between enzymes and some inorganic colloids is seen in their sensitiveness to the inhibitive action of minute traces of certain substances; the proportion of catalyst to substance acted on, and of the inhibiting substance (which has been called a paralysator) to the catalyst, are very small—for example, a solution containing 0.00001 gram of colloidal platinum per c.cm. acting upon a solution of hydrogen peroxide containing 0.06 gram per c.cm., converted more than half of it into water and oxygen in forty minutes; the addition of 0.000000014 gram of hydrogen cyanide per c.cm. reduced the rate of change by one-half.

This resembles the effect which has been found to be produced upon living organisms by minute traces of certain metals in distilled water, traces far too minute for detection by any chemical analysis. Thus, mere immersion of a strip of clean copper in a vessel of distilled water containing a number of tadpoles, which would otherwise live in it for several weeks, is sufficient to kill them in a few hours. At the last *soirée* of the Royal Society (June 14th, 1911) Mr. Henry Crookes exhibited a number of cultures of *B. phosphorescens*, and photographs of cultures of *B. coli communis* and *B. prodigiosus*, showing the germicidal effect of certain metals. Nutrient fish-agar was poured into Petri dishes, each containing a small square of metal, and when the agar had set the surface was inoculated with the bacilli; after twenty-four hours they were found to have grown freely except in a zone round the metal. It is interesting to note, however, the differences between different metals in this germicidal effect. Gold, platinum, and a few others had no such action; copper, bismuth, zinc, etc., had a slight germicidal action; and silver and mercury were among those showing strong germicidal action.

Professor Albert Robin of Paris, in a treatise entitled *Les ferments métalliques et leur emploi en thérapeutique*, has described the results obtained in a number of therapeutic trials of metallic hydrosols, prepared according to the method of Bredig described above. He refers to the theory that the catalytic powers of enzymes are not due directly to their constitution, but to their molecules being in a state of vibration and capable of communicating such vibration to other substances, and so to cause them to undergo chemical change; he expresses his own view that metallic sols, which he calls metallic ferments, act by virtue of the intense vibratory movement of their extremely minute particles. According to his experience the properties of the sols *appear* to be identical, whatever the metal dissolved; this is slightly qualified by the statement that he thought he had obtained more regular therapeutic results with palladium than with platinum and gold, but he found that the solutions of the two latter which he was using at the time underwent alteration more rapidly than the solution of palladium, and he ascribes the superiority of the latter solution to this fact. In regard to germicidal action, the experiments by Charrin, Monnier-Vinnard, and others which are quoted were all made with colloidal solution of silver, and showed a very high germicidal effect on pneumococcus, staphylococcus, and several other organisms; it would have been interesting to know how far similar properties were shown by gold and platinum, in view of Dr. Robin's statement that they did not appear to differ therapeutically, and the great differences in the germicidal actions of the metals themselves as shown by Mr. Crookes's experiments. In his therapeutic tests Dr. Robin employed hydrosols of silver, gold, platinum, palladium, and an organosol containing manganese combined with albumen and alkali. The hydrosols were prepared by Bredig's method; as already noted, they are immediately converted into gels by the addition of an electrolyte or by heat, and consequently they cannot be employed in isotonic solution, nor can they be sterilized by boiling; the author states, however, that these hydrosols should alone be used, and not those preparations in which the addition of a reversible colloid has produced a more stable mixture. His words on this point are emphatic: "It is necessary to call the particular attention of practitioners to the fact that it is impossible to use in practice with advantage metallic solutions said to be stabilized by an organic colloid, sterilized by heat, and containing sodium chloride or other salts designed to render them isotonic. There are, in fact, a number of commercial preparations thus produced the use of which can only lead to failure or to incomplete results by which therapeutic agents of the highest value are discredited." He also insists that Bredig's silver hydrosol is quite a different thing from collargol, and gives a list of reactions in which they behave quite differently; it is interesting to note, however, that Zsigmondy examined Carey Lea's colloidal silver with the ultramicroscope in comparison with Bredig's, and found that at suitable dilutions, the number, size, and motions of the particles were much alike in both.

An account of the results recorded by Dr. Robin would be beyond the scope of the present general summary; it will suffice to say that he describes in some detail the use of these colloids in various diseases, including pneumonia, acute rheumatism with complications, meningitis, typhoid fever, scarlatina diphtheria, and puerperal septicaemia, in which the results appear to have been very favourable, and Bright's disease, secondary syphilis, pulmonary tuberculosis, and cancer, in which no benefit was obtained.

THE NEED FOR CO-ORDINATION OF CLINICAL AND LABORATORY WORK.

A DISCUSSION on this subject took place at a meeting of the Forfarshire Medical Association held in University College, Dundee, on Thursday, January 18th; Dr. ANGUS MACGILLIVRAY presided.

Dr. ARCHIBALD LEITCH, introducing the discussion, said there was a gulf between clinical and laboratory endeavour, and the separation was to the interests of neither. An intimate association would be for their mutual good. There was a suspicion that the laboratory worker, dealing only with the scientific aspect of disease, regarded the clinician, dealing with the art of medicine, as one performing an inferior round of service to his kind. If that suspicion existed it was ill grounded. The clinician, on the other hand, feeling that he was in close contact with actualities, might sometimes regard the pathologist—using the term broadly—as being akin to those philosophers of Laputa who had one eye turned internally on themselves and the other fixed on the zenith, and who could only be brought into a proper appreciation of their surroundings by a tap on the head from their attendant flappers. But these extreme views, it must be admitted, were a rational outcome of our present inco-ordinated system. They could name certain institutions devoted to medical research which had no clinical connexions, and too often their researches were lost or were as seeds cast in unfrequented ground, perhaps years afterwards springing into flower that a wayward traveller in the by-paths might find and cull. Their results did not enter at once into general currency. The scientific investigator spoke mainly to others of his kind; but was not that true also of the clinician? They had no common ground. There were large clinical hospitals with no institute for medical investigation of diseases. But in the majority of cases they had the conjunction of wards and laboratories that went to make up the complete hospital. At the present time they lacked co-ordination. If they looked back over the great advance in past medicine, even within fifty years, all must recognize how much they owed to what one might call extra clinical endeavour and to the play upon that of the clinical mind. They would notice, too, how fruitless were the attempts of the pure clinician to work out into the unknown. It was but natural that one devoid of the only means of gathering new facts by experiment should have recourse to arm-chair speculation which was absolutely harmful in medicine. Let them note the enormous advance in surgery and recognize that facts gained in research, applied by a man who had his eyes alight, brought about the revolution. The father of antiseptic surgery—pathologist first and clinician afterwards—was an example of co-ordination by and in an individual. Our whole system of public health was a co-ordinated effort, and if its advance was due to one thing more than another it was to the researches of the bacteriological laboratory. The authorities under the Insurance Act would suffer financially by disease and profit with health, and, however it might eventuate, medical practitioners and practising specialists were bound to become more and more preventers of disease, trying, at least, to stifle it at its commencement, rather than palliate it in its late manifestations. At central institutions every practitioner ought to have the facility for prosecuting study, elsewhere impossible or inconvenient. The laboratory was more useful than a book. It was a dream of Plato that the time would come when kings would be philosophers and philosophers would be kings, and it might be as much of a dream to wish that all physicians were pathologists and all pathologists physicians. It was rarely possible for one man to be pre-eminent in both. If in medicine the inevitable specialization of effort prevented an equal combination, it was surely possible that each might take one as his principal aim and the other subservient, so that they might dovetail into each other's domains, to their mutual help. Combination was more effective than separation, and they needed a connecting link between the clinician and the research worker—a department where they had common ground. He would like them to consider the advisability of the clinician and the research worker meeting on the common ground of "clinical pathology," and, secondly, the possibility of dovetailing in problems where the special knowledge of each might be helpful to the other. Let them erect in their minds an institution for the purpose. Take the Royal Infirmary. It was a clinical institution primarily. It might be perfect in that respect or it might be just short of it. He did not know and had no opinion. But there they could build the supplementary part of the scheme. They might build, first of all, a flat for the department so absolutely necessary for the clinician—the department of the clinical pathologist—giving respectable facilities for the prosecution of his work, and especially a reasonable staff. They might expect him to be partially supported as a teacher training a younger generation in newer methods, but from the clinical part of the infirmary more would be expected, because he would give it more. In his *post-mortem* room, acting both as physician and pathologist, he would correlate the clinical with the pathological features. He could properly appreciate both, and his records would not be archives of oblivion. He would see the terminal phases of that series of life pictures which in the future they hoped to blot out fully, but of which the clinician might have had only a brief, a partial or obscured view of one particular phase. The clinician and research pathologist must together take things step by step back to origins, and get them "before they were." Laboratory methods of diagnosis, microscopic, bacteriological, and clinical diagnosis would furnish more work. The clinical pathologist would carry out in actual practice the methods which research pathologists had experimentally shown to be possible. He would utilize the material good that had emerged from more theoretic investigations. Having housed the clinical pathologist and given him work to do, let them put on another story. They were getting nearer the heaven of pure research, and would give this flat to their research bacteriologist. They would not buy him cheaply, but good; and they would provide him with work—any amount of it. They gave him the whole range of known and suspected microbic diseases, and they told him truthfully how little they knew. They asked him to turn his eyes away from anthrax and cholera and to work at acute rheumatism. They told him that it caused 75 per cent. of all heart diseases in later life, and that heart diseases were very common. They said to him that first of all they must find the cause, and it was for him to do it. When he had found that he might devote some attention to the way in which it might be combated or prevented, or how the body's fight against it might be fortified. They led him along and showed him pneumonia and the heavy toll it exacted. They told him that they knew the cause and they knew the result, but that there their knowledge ended and it was for him to fill in the stages between. They showed him tuberculosis and told him it decimated their young men and was very costly to their cities. They knew the cause, they knew many of the steps, and they knew how to prevent it and often to cure it, but that there was much more to know, and they whispered that if he did some useful work in it perhaps the Chancellor of the Exchequer would make it worth his while. They told him that the ophthalmologist would like to do some eye work in his laboratory, but that as he, the bacteriologist, knew nothing whatever about eyes, he would have to take the advice in regard to some things from the ophthalmologist, and in exchange must lend him the aid of his laboratory lore. They would introduce the dermatologist, and, though it might not be possible to get him to understand the sesquipedalian phraseology of the physician, he might be able to show him how to get to work towards a solution of his problems. They would introduce the gynaecologist and leave them alone without a word. They would bring along the physician and the surgeon and state the special problems that interested them, and they expected him to advise them, for he had special knowledge where they failed, and they had knowledge where he was completely ignorant. They would leave this department full and busy, and would build a third flat for workers investigating other diseases not of microbic origin. The day was past when pathology was a study of morbid anatomy; it was morbid physiology. All the workers of the institute would co-operate with each other—co-operate with the hospital staff and the general practitioners—and duplication of effort would

be avoided. He would not suggest that they should have a superintendent and various underlings. The best work that was done, especially in Germany and in France, was done where there was more or less a scientific republic. They were all working towards a common end; let them build together, let them understand each other, and not be like the tower-builders of Babel, whose work came to naught because they spoke in myriad tongues. Much of their work might be scaffolding that in time would go down, but it would leave the solid fact, a monument more enduring than brass, which the wind and the biting rain would be powerless to destroy.

Dr. MacGillivray said he had always thought that specialists were like the spokes of a wheel; the more they specialized the more they diverged. What they wanted was that specialists should meet together and assist one another. They had in the pathological department of the university an efficient means of teaching scientific pathology to their medical students and to their research students. Also at the infirmary a most effective clinical pathological laboratory was mainly devoted to teaching, but it must be clearly understood, before the discussion proceeded further, that both these institutions were at the service and the disposal of any person in the district who cared to work there. If Dr. Leitch, with the aid of Mr. Lloyd George, could bring his castle in the air to terra firma, it would be one good thing to be said in favour of the Insurance Act. As regarded private laboratories, every one knew that these were exceptionally costly, and he spoke from experience when he said that they were an enormous expense not only in money, but in time, brains, and energy. All they should need to do was to go to the director of studies, who would show them how to do the piece of research necessary. It was perfectly simple, if seen. He could not have carried on the research he had just completed had it not been for the kindness of Professor Sutherland and his staff and of Dr. Milne. Any man who had had gone through the curriculum and who saw a thing done with his own eyes could do it himself. Laboratory methods were perfectly simple if they saw them carried out. They had in their midst an admirable Clinical Research Association; but it had always struck him that they did not learn work from it; they got the results, but the real interest was doing the work for themselves. The scheme proposed would not interfere with present arrangements; it would bring the clinical side of their work into line with the pathological laboratory, and if Dr. Leitch could bring about that happy consummation, he deserved every encouragement.

Professor Stalker said he was wholly in sympathy with Dr. Leitch regarding the need for co-ordination of clinical and pathological work. It was a realized dream in many parts of the world, more particularly in Germany, but still far short of even approximate realization here. They were too much in the habit of looking for immediate results in this country. They could not hope for dividends immediately in this matter; but they could quite realize the sums of Dr. Leitch's conclusions and the irrefutable basis on which his scheme was built. If they were put under the guidance of rational ideas, and not merely hurried forward to a rough-and-ready practice, many of the lecturer's promises would fulfil themselves. They had been already working forward within the light of Dr. Leitch's ideas; but perhaps it was in a hand-to-mouth fashion—here a little and there a little; and in bringing the clinical observer and the pathologist into closer union Dr. Leitch was striving to show them that they should do so much more systematically and more as part of their routine business, recognizing that the clinical observer was useless without the scientific observer. They had to recognize that an immense portion of physiology suffered from its dissociation from medicine, and there were many directions in which the pathologist could work for days, weeks, months, and even years at long distances from the clinical observer, out of his sight altogether. There was continual need of the clinical observer coming more and more into co-ordination with the pathologist.

Dr. Tulloch said he was somewhat pessimistic over the ideas of the lecturer. In the first place he was very much mistaken if they would lift the general practitioner up into any such ethereal sphere. His time and the emoluments of his office scarcely warranted that angelic attitude. He felt that there was some go-between needed between the general practitioner and advanced knowledge, and yet he would not keep too close to the heels of the theorist, because he was apt to kick occasionally; for though there was truth to be got, there was a great deal of error, and if the practical man at the bedside was to do his patient good and not harm he had better follow at a respectful distance. At the same time, if they could bring about a closer union between the man at the bedside and the man with the microscope, it would be a very good thing. But he felt that the man at the bedside could get most of all he required done for him. He could send his specimens, and for a very small sum could get investigations and reports such as he could not himself attain even if he devoted a considerable part of his time to laboratory work. The clinician had the good of his patient to consider. He was not simply an educationalist, not even an educationalist for himself. He must look to the curing of the patient. The study was very interesting, but the curing of the patient was the first consideration. With the main idea that there should be closer union between the clinician and the laboratory expert he agreed. He thought that scarcely any practical good could immediately come out of the scheme, because it was not sufficiently formulated.

Dr. Mackie White said he was entirely in sympathy with the scheme which had been mooted by Dr. Leitch, and although, as Dr. Tulloch said, it was somewhat inchoate at present, they must begin sometime, and it was more than time they were begun in that work. The fact was we were absolutely an insular nation as regards the whole question, and if they went to a German school and had a talk with the Germans who were busy working at that sort of thing, they could not help seeing that there was a veiled contempt for most of the work being turned out in our own country with regard to these matters. The relationship of the patient and practitioner was a thing by itself, and there was no reason why that relationship should be anything but improved by having in their midst such an institute as Dr. Leitch had suggested. In fact, before long they would be absolutely forced into it, and the great pity was that they had sat still so long doing so little themselves. Discussions at the Forfarshire Medical Association and Branches of the British Medical Association had had little tendency to educate the public, yet rich men were only too glad to be able to spend their money for scientific purposes if they were assured that the money was being well spent. If they put before them the facts as to what was being done in Germany, Italy, or any other country where much attention was paid to scientific developments of medicine, he was quite sure these men would be ready to assist. They would not make a few comfortable cribs for men to do nominal work. Dundee was a young medical school, and he did not think its record was altogether bad for the twenty-five years it had been in existence. When the school started they were in hopes that, free as it was, or should have been, from all binding traditions, they would avoid the old shackles and devote themselves more to clinical, hospital, and laboratory work, upon which the new medicine was being founded. Medicine would advance without them, but it was a great pity to be left out in the cold and to have to go to others for the cure of cholera and tuberculosis, instead of having men in their midst who might do the work as well as those of any other country.

Professor Kynoch said he wanted it to be distinctly understood that the staff of the Royal Infirmary had been aware of the importance of the subject which Dr. Leitch had brought before them, and, persistently, for years they had kept the matter before the directors of the Infirmary and the University authorities; and though he did not say that they had anything like a three-storied building at the Infirmary, they had achieved something, and the Dundee Medical School offered its students adequate facilities. Under the direction of Dr. Milne, at the Clinical Laboratory, they received all the instruction which it was possible for them to retain in their student career, and if they wished to follow out their research work, the laboratories in the Medical School were at their disposal. Men in country districts could not be expected to come and carry out experiments for themselves, and the Clinical Research Association filled a very great want. As to Germany, he knew something about

German hospitals and laboratories. They were told that they could not compare with German work, and he said it was not because the Germans had got fine lab ratories or fine institutions; they worked for the love of their subject. He thoroughly supported everything Dr. Leitch had said, but he wished to emphasize that the work was being carried on in a quiet way, not in elaborate buildings, but with fair facilities, which he would like to see improved on the lines Dr. Leitch had so admirably pointed out.

Dr. R. C. BUIST said he did not at all under-estimate the advantages they at present possessed, but as for being satisfied with them he could not possibly use that term. Any afternoon they liked to look into the pathological laboratory they would find the general practitioner at work qualifying in public health or bringing material from his own cases and applying methods he had learnt in the laboratory. But the whole school, clinical and pathological, was in great need of a large increase of staff. Speaking for himself, he had had through his hands during the past twelve years an enormous amount of material which, owing to the want of staff at his disposal, he had not been able to utilize, though it contained promise of considerable contributions to practical medicine. He pointed out that members who recalled the address which Dr. Bruce of Murthly had delivered would remember the valuable results of the co-ordination of laboratory and clinic in mental disease; and it was also within the knowledge of members of the Association that of the men who had gone out from the Dundee School more than one had distinguished himself by his contributions, such as those of Dr. Murray on the serum reactions of pregnancy, and Dr. Nicoll, the Ernest Hart Scholar of the British Medical Association, on fly-borne diseases. It would seem extraordinary that the country which had produced Harvey and Hunter and Jenner should at any time have to take a back rank in the matter of scientific investigation, and he was quite sure that what was needed was not fresh men, but opportunities for them to apply the abilities they had. This was a situation in which Croesus might very well come to their assistance and help them to establish and build that institution from which the results to the community, and to practical medicine in particular, would be of the greatest value. Many illustrations of the need of co-ordination might be brought from the therapeutic as well as the diagnostic side. He would give them a practical illustration from the practitioners' standpoint of the interest of the individual life to illustrate the advantage. It was only ten days ago since he had a case in which he as clinician was at a standstill. He called in a clinician of wider experience, but they were still at a stop. They consulted Dr. Milne, whose report put them in a position to relieve the patient. If this work was to be fully co-ordinated, they must have at their disposal much greater resources, and resources which could be applied to the work without any danger of being taken away from their medical charities. It was the necessity for avoiding competition between the research, and the purely therapeutic and charitable side of the institution, that he should like to emphasize, and he thought there was great public need for such development here and elsewhere.

Dr. MILNE said what Dr. Leitch had outlined in his remarks was an expression of the wish of every general practitioner, but the general practitioner was very suspicious of the scientist, and the reason for that was that the matter he read in the medical journals was far too technical for even scientists to understand, if they had not had the opportunity of doing the experiments for themselves. The experiment was easy; it was the explanation that was difficult. Dr. Leitch had outlined a scheme that was novel for this country. Perhaps the institute at Baltimore most nearly exemplified what Dr. Leitch meant. It was asked what good such an institution would do, but they might take the instance of the out-patient department of a hospital where there was a laboratory department. If there was a puzzling case there could be personal interviews between the surgeons or physicians and the pathologist or bacteriologist, and it would be much more valuable to the general practitioner that his patient could be sent to such an institution, and have the technical manipulations performed in such a way that the pathologist could have no doubt about the final diagnosis. He did not need to emphasize the importance of these methods of diagnosis; the pathologist was able to help the general practitioner in diagnosis in his own house. A general practitioner read in the medical journal that a certain method could be used in a case, but if he saw it employed he could use it in the future. He thought it would be a great benefit to the community that there should be a research man on the spot. If, say, an outbreak of typhoid occurred in Dundee, a research man might be put on to discover the causes that were local to Dundee. Then Dundee held a by no means creditable place in the lists of mortality, and there was much to be done in the matter.

Mr. DON said that at present a great deal of the material that passed through their hands was absolutely wasted, except as giving them a little more practical experience. The diseases were cured after certain rule-of-thumb methods, but the clinician was altogether dependent on himself, and it was evident that the great amount of work that was to be done could not be undertaken by one man or by half a dozen men. Their present pathological efforts were small as compared with the size of Dr. Leitch's scheme, and so long as they had only one or two or half a dozen pathologists to undertake the work there would likely be a great part of it left untouched. Time was given to what they might call the more interesting matter, and the common diseases were left over. He thought it was staffing they required and not so much brains or enthusiasm; they would get that as well if they had the staff.

Dr. FOGGIE said that the pathologist and clinician were both working on the same level, and the sooner that was definitely recognized the better. The attitude of the pathologist towards the physician wanted correction, and the attitude of the clinician towards the pathologist might require some little change. The great difficulty at the present day, when physicians and pathologists worked so closely together with regard to disease, was to get them to take a better view the one of the other. It was only by conjoint consultation and by active co-operation of the two workers that they could expect any progress. A great deal would depend on the *personnel* in Dr. Leitch's scheme; at present the *personnel* was excellent, but it was too limited. They could not expect one man to take up the whole subject, and no doubt they wanted in Dundee some one who could lecture on pathological chemistry. It was a distinct want, and they would require a man to devote his whole time to the matter. Another department that would be necessary would be a vaccine department such as they had in St. Mary's and Guy's in London, and he pointed out that much of the work that was being done in such places was influencing very largely the work done in Germany. With regard to tuberculosis, the difficulty was to know how much vaccine one should give to a patient, and unless they had some one to guide and control them they found clinical resources at an end, and the chances were that they might be doing more harm than good. In any future work they must look to more active co-operation between the clinician and the pathologist.

Dr. TULLOCH said the proposal to call in the laboratory man was all right; his remarks were addressed against the idea of the clinician becoming a laboratory experimenter. He agreed that the students should be brought in whenever possible.

Dr. PIRIE referred to the desirability of having an electrical department in Dr. Leitch's institution, and instanced a case where such methods had been of use to him. A lady had trouble with her wrist, whether due to a fracture or tuberculosis was uncertain, but examination in the laboratory at once made the fracture clear.

Dr. KERR asked if in the institution there would be diagnosis of diseases for poor patients who could not afford the cost of research.

Dr. LEITCH, in reply, said it seemed inevitable that laboratory methods of diagnosis must ultimately be provided for under the Insurance Act. As to whether the idea would be realized, that meeting was the first step in that direction. Their clinical material was being wasted because the clinician did not know what could be done with it and the pathologist did not know it was there. As to Germany's advance, he said it was due, not to the fact that the Germans were more scientific than they were, but because Germans had the opportunities and they had not.

BRITISH MEDICAL BENEVOLENT FUND.

AT the January meeting of the committee 14 cases were considered and grants amounting to £86 made to 11 of the applicants. Appended is an abstract of the cases assisted:

1. Daughter, aged 44, of late M.R.C.S. No income, and has been unable to earn a living for some years on account of increasing deafness. Finds she can hear with an instrument recommended by an aural surgeon, and asks for assistance to purchase it. Voted £5.
2. M.B., C.M.Edin., aged 57. Has a small practice in Hampshire, but finds great difficulty in obtaining his fees, and asks for a little help. Voted £5.
3. Widow, aged 41, of M.B., C.M.Edin. Quite unprovided for at husband's recent death after a long illness, and has four young children, the eldest only being 5 years old. Voted £10.
4. Daughter, aged 57, of late M.R.C.S. Is most willing and anxious to work, but has broken down in health and been obliged to give up a situation as companion. Relieved once, £12. Voted £12.
5. Daughter, aged 74, of late M.R.C.S. Supplements an income of a few shillings a week by needlework, but is unable to earn as much as formerly on account of rheumatism and failing eyesight. Relieved thirteen times, £125. Voted £12.
6. Daughter, aged 59, of late M.R.C.S. Has supported herself for more than thirty years as governess, school matron, etc., but is now unable to obtain a suitable post. Relieved five times, £60. Voted £12.
7. Widow, aged 56, of M.R.C.S. No income, no children, and unable to maintain herself on account of ill health. Relieved eight times, £80. Voted £2, and case to be reconsidered.
8. Widow, aged 60, of L.R.C.P., L.R.C.S.Irel. No income and is practically incapacitated by the loss of her right hand. Children unable to help. Relieved eight times, £68. Voted £12.
9. M.D.Aberd., aged 59. Used to have a fair practice in a Midland town, but has been incapacitated for several years by spastic paralysis, and is entirely dependent on pensions obtained from charitable societies. Three children, the eldest only 13 years old. Relieved three times, £33. Voted £5.
10. Widow, aged 66, of M.D.Edin. Supplements a small weekly allowance from relations by taking a boarder, and asks for a little help to meet unavoidable expenses. Relieved twice, £12. Voted £6.
11. Daughter, aged 50, of late F.R.C.S. Has supported herself as a companion, but at present has no post, and is not in very good health. Relieved six times, £35. Voted £5.

Contributions may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole Street, W.

British Medical Benevolent Fund Guild.

On January 25th a drawing-room meeting of the British Medical Benevolent Fund Guild was held at 100, Harley Street, W., to meet the Lady Mayoress and to consider the extension of the Guild. Fifteen ladies have offered to work in making the charity better known, taking the metropolitan boroughs (with subdivisions) as the basis of the scheme. As a result of the meeting eleven boroughs will be systematically worked, and it is hoped that very shortly the whole twenty-nine will be visited. The ladies will work with Mrs. H. H. Clutton (3, Park Square, N.W.), who has consented to be chief secretary and organizer; and a date will be arranged when the workers and friends of the Guild will meet by invitation of the Lady Mayoress at the Mansion House.

SCIENCE NOTES.

Two other interesting cases of a parasite being itself afflicted by another parasite have been brought to light. It is well known that considerable destruction is wrought amongst olives by the olive fly, *Dacus oleae*. This beast, however, is one of the most unfortunate parasites, for it is infested not only by two different hymenopterous insects, but also by a third species, *Opius concolor*, which Marchal[1] has discovered in North Africa. Unlike the first two, the newcomer is a serious menace to the olive fly, pursuing it assiduously throughout its whole career. It passes its larval stage in the larva of the olive fly and passes into the pupal stage along with the latter. This inveterate foe is apparently not a European species, but, from economic considerations, Marchal recommends its importation. These importations, however, are not so generally successful as might be desirable. Of somewhat different character, though perhaps of more immediate interest, is the case reported by Fantham recently to the Royal Society. It concerns the common body louse, which is found to be the host of a species of flagellate protozoon—namely, *Herpetomonas pediculi*. Parasitic insects, such as fleas and lice, are, of course, well known as carriers of certain phases of the flagellate parasites of vertebrates, but the present case is in a different category, in that the *Herpetomonas* is confined to the louse, and is not a stage in the evolution of some vertebrate flagellate. The case is, indeed, analogous to the numerous instances of flagellate parasites inhabiting the alimentary canal of non-parasitic flies and other insects. These forms are usually non-pathogenic, and of little economic importance; but the present instance is of indirect importance from the fact that the body louse is suspected of transmitting *Leishmania infantum*. The knowledge that a flagellate parasite occurs naturally in the louse may prevent misinterpretations. It is of interest to add that the lice with which Dr. Fantham experimented were fed on his own body, and that at no time could flagellates be detected in his blood.

On reading an article by Gruvel[2] on the classification of lobsters we were somewhat struck by the straits in which systematists are sometimes placed in inventing names to designate genera and species. The enormous multiplicity of the latter has of late severely taxed the resources of the Latin and the Greek languages. It is a tacit understanding that the names should, if possible, bear some relation to the forms described, and fifty years ago that was not such a difficult matter. For specific names there were the old and well-established favourites, *magnus*, *parvus*, *crassus*, etc., while for generic names there was a variety of choice. In the course of time, however, the familiar classical roots were found inadequate to express the never-ending variety of permutations, and recourse was had to various subterfuges. Of these the most popular were place-names such as *tahitensis* and names of persons such as *Ludwigi*. Generic names, always the most difficult of invention, were also formed from persons' names, and in consequence we find almost every European name immortalized in terms such as *Mackenzia*, *Lankesterella*, *Dicksonia*, etc. These names obviously do not give any clue to the structural characteristics of the forms so designated, and for all practical purposes one might invent any agglomeration of letters with a suitable termination, such as *Gollywoggia*, and the unfortunate animal and plant would rejoice in the name for evermore, provided it escaped the meshes of the law of priority. A more skilful subterfuge, and one which has not been so universally adopted, is exemplified in the case of the rock lobsters. There is a well-known genus *Palinurus*, created by Fabricius in the latter half of the eighteenth century; the rock lobsters, in fact, are zoologically known as the *Palinuridae*, a name founded on this genus. It did not require much ingenuity to create a diminutive, namely, *Palinurellus*, but a more ingenious idea is evidenced in the metatheses—*Panulirus* White, and *Linuparus* Grey. This represents just about the limit of nomenclatural poverty, and is only surpassed by the case of the scientist, not altogether unknown to fame, who at the time of writing happened to be enamoured of the fair maiden *Carolina* by name. Such names as *Linocara*, *Rocalina*, and *Calonira* betray their origin only too well; at least, so the story goes.

A most remarkable instance of adaptation is described by Henneke[3] in the case of the fresh water tardigrade or water bear, *Macrobiotus macronyx*. On its first appendage the male bears peculiar hooks which are used in sexual union. The female about this time begins to moult, but the last skin does not actually fall off. It remains attached posteriorly as a sort of vesicular appendix. The males congregate around this, pierce it with their hooks, and discharge their sperms into it. The sperms are then left to find their own way into the cloaca of the female, and it is not surprising that all do not reach it. The female then proceeds to lay eggs, and here again the old skin is made to serve another useful purpose as a brood pouch, in which the eggs accumulate. They are carried about in this way until the young hatch out, when the skin finally drops off, although it may do so somewhat earlier.

[1] *Comptes rendus*, 1911, p. 215.

[2] *Comptes rendus*, 1911, p. 1350.

[3] *Zeitsch. f. wiss. Zool.*, 1911, p. 721.

LITERARY NOTES.

DR. GEORGE B. SHATTUCK has retired from active editorial management of the *Boston Medical and Surgical Journal*. Dr. Shattuck became editor of the *Journal* in 1881, and has therefore had an editorial experience of thirty-one years, a term exceeded in the United States only by Dr. I. Minis Hays of the *American Journal of the Medical Sciences* and Dr. George F. Shrady of the *Medical Record*, and equalled only by Dr. Frank P. Foster of the *New York Medical Journal*. The *New York Medical Journal* in referring to Dr. Shattuck's retirement says, he "may well be satisfied with this long period of devotion to literary medicine, but his pride must be great as he reviews his work and sees how, under his management, the *Boston Medical and Surgical Journal* has not only maintained the high standards which have always characterized it, but has also steadily advanced in dignity and influence, holding its own with friendly rivals in the front rank of medical journals."

Allusion was made in the JOURNAL of January 27th to a man who described himself as the "Great Twalmley" on the strength of his being the inventor of a kind of box iron for smoothing linen. Boswell adds that the Bishop of Killaloe, on hearing the story, defended Twalmley's title to the epithet of "great," for Virgil, in the sixth book of the *Aeneid*, mentions among the group of worthies in the Elysian fields, "Inventas aut qui vitam excoluere per artes." While gladly admitting this claim, we do not think that a list of the world's greatest men should be all inventors of mechanical devices. A story used to be told of the late Mr. Labouchere that, on meeting Mr. Poole at Marienbad, the celebrated artist in masculine clothing complained to him of the mixed character of the visitors, to which "Labby" replied, "You would not have them all tailors, would you?" We need not point the moral of the "fable."

A correspondent writes:

> Your remarks on the pronunciation of "enema" remind me of an incident years old. A certain surgeon who was noted for his quotations from Scripture on every occasion, possible and impossible, on going round his wards saw a patient with a high temperature. He gave directions to the nurse, and on the next day, on looking at the chart and seeing a marked fall in the temperature, he exclaimed with satisfaction:
>
> Truly an enĕma hath done this.
>
> Pronounced with a long "e" it would have had no point.

The *Aberdeen Daily Journal* of January 9th, in recording the death of George Florence, a farmer who recently died at Glenfoudland in his 91st year, gives some reminiscences of body-snatching. The deceased was a son of the late John Florence, for over half a century a grave-digger at Culsalmond, an occupation in which he was succeeded by another son. Florence was 11 years old when the resurrectionist rioting occurred in Aberdeen, and he had many recollections of the incidents associated with the suppression of the work of procuring bodies for dissection. In many churchyards in the north a place was set apart for the watchers—friends and relatives of the deceased persons who came to watch the place of interment for several nights after the burial. To the body-snatchers the churchyard of Culsalmond was something of a terror. It was practically unassailable. In a corner of the enclosure was erected a watch-house, where bodies were kept for weeks after death, until they were useless from the anatomist's point of view. The walls were of extraordinary thickness, the doors were of iron doubly fashioned, doubly locked, and the keys were placed in the custody of four key-keepers, elected periodically, and without whose personal attendance no one could enter. Among other gruesome stories which Florence had heard of in the north was that of an old man who had been in the habit of disinterring the recently buried, and selling them. He reinterred those for which he could find no purchasers in a piece of waste ground. He carried on this traffic for years, and after his death phantom forms and lights, it was said, were seen at the place where the unsold bodies were buried. In course of time, however, a church was built at that spot, and the ghosts never again appeared. Two farm servants one night had gone to visit their sweethearts, who were maidservants at the manse in an Aberdeenshire parish, and pending the arrival of the trysting hour they sought the shelter of a "lythe" corner of the graveyard. They had not been there long when two men arrived carrying pick, spades, and a small lantern. After scanning the ground for a moment with the aid of their lamp, they located the spot where they knew a grave had just been filled and a small white peg put at the top. Seizing hold of their implements in a businesslike way they set to work, and in less than half an hour they had the body exhumed and put into a bag. They placed the corpse under some shrubs while they went for a vehicle which had been left some little way off. While the body-snatchers were gone the ploughmen hid the body, and one of them volunteered to go into the bag and give the resurrectionists a fright when they returned. When the grave-robbers picked up the bag they noticed a movement within it, and heard a groan. For a moment they hesitated, then were about to shoulder their burden when another sepulchral groan from the bag, and a weird, unearthly yell from a corner of the graveyard made them drop the bag and fly in terror, leaving horse and trap behind them. The ploughmen were well rewarded for the part they had played, for the horse and trap were never claimed.

An eighteenth century doctor's bill which appeared in the January number of the *Old-Lore Miscellany of Orkney, Shetland, Caithness, and Sutherland*, Part I, vol. v, may be of interest to our readers as showing what may be taken as the average fees charged by the family doctor of that period. The original of this interesting document is in the possession of Mr. Horatius Bonar, W.S., of Edinburgh, and relates for the most part to the last illness of Mr. John Bonar, a minister of the Scottish Church, who died on April 22nd, 1752, and was attended on his death-bed by a certain John Gifford. The account, which is headed "Accompt Mr. John Bonar, minister, to Jno. Gifford, surgeon, 1752," runs as follows:

		Str. £	s.	d.
	For antiscorbutic materialls to your daughter...	0	4	0
Febr. 17.	For a glass Wades balsam		4	1
March.	A blooding to yourself		1	0
Aprile.	For a purging potion		2	0
	For a box of alterative pills		4	8
	For a purging apozem		2	0
	The alterative pills renewed in larger quantity		6	1
	Fourteen doses Peruvian bark ...		6	1
	For three purging doses		4	6
	For liniments, tincture, &c., to your mouth		10	6
		2	4	11
	For travelling charges and attendance	2	10	0
		4	14	11
	Received in cash	1	0	0
		3	14	11

Towne, 2nd July, 1752, by the above acctt. theire is a ballance of three pound fourteen shills. and eleven pence str. due by Mr. John Bonar in favours of Jno. Gifford.

The above accompt payed to and discharged by
(Signed) JN.O. GIFFORD.

One wonders if "the above accompt" was considered excessive by the family of the deceased minister, and if "Jno. Gifford, surgeon," continued to attend them whenever they happened to require "a purging potion" or "a box of alterative pills." The January number of *Old-Lore Miscellany* contains several other items of interest besides this page from an old account book. A graphic description of "Some Old-time Shetlandic Wrecks" has been contributed by Mr. R. Stuart Bruce; whilst Mr. J. Storer Clouston writes very entertainingly on the origin of "Orkney Surnames," and Mr. Gilbert Goudie gives some interesting examples of the ancient folk-lore of the Shetland Islands. A curious piece of literary history, moreover, is to be found in an article on the new Gaelic dictionary, from which we learn that the compiler, Mr. Ewan MacDonald, far from being a Highlander, hails from the West of England; and, with a disinterestedness rare enough in these days, gave up nine years of his life to the stupendous task of writing and printing with his own hands a book which in future should be "indispensable alike to Celt and Viking."

British Medical Journal.

SATURDAY, FEBRUARY 3rd, 1912.

THE COUNCIL AND THE CONFERENCE.

The Insurance Commissioners have begun badly. They issued last week an invitation to a number of medical bodies to send representatives, in proportions arranged by the Commissioners, to a private confabulation in Whitehall this week. The medical bodies have all with one accord begun to make excuse, and Mr. Masterman, M.P., the Chairman of the Joint Insurance Commission, must already have realized that he has been led into committing the least excusable of political offences—a blunder.

The proposal of the National Insurance Commissioners to hold a conference on Friday, February 2nd, with representatives of the medical profession was notified last week (page 211) by the publication of the correspondence with the Association so far as it had then gone. The Commissioners addressed a similar invitation to a number of other bodies, and specified the number of representatives that they desired to attend. The bodies included the following, the figures showing the number of representatives invited: The General Medical Council (6), the three medical corporations of England and the three medical corporations of Scotland (2 each) (12), the three medical defence societies (2 each) (6), the Incorporated Society of Medical Officers of Health (2), the National Medical Union (2), the British Medical Association Reform Committee (2), the Imperial Medical Reform Association (2), the British Medical Association (20). The Association of Medical Women also received an invitation, which it at first accepted, but it is now, we are given to understand, reconsidering the matter.

When on Wednesday the consideration of the invitation to send representatives to the proposed conference was reached by the Council, the objections to its unconditional acceptance were at once pointed out by Dr. Maclean, Dr. Todd, Dr. Buist, and other members of the Council. Attention was drawn to the disposition which the Commissioners, by this action, appeared inclined to show to continue in respect of the Insurance Act the hasty hustling methods which had characterized the course of the bill through Parliament, methods which the pretence of political expediency could no longer be invoked to excuse. The invitation to the bodies concerned had been issued only eight or nine days before the conference was proposed to be held, an interval which allowed no time for adequate consideration by the various executives, much less for any consultation with members—an objection which had special force in the case of the British Medical Association, particularly in view of the fact that a Special Representative Meeting was being summoned for an early date—less than three weeks hence, in fact. It was urged that before going into any conference with the Insurance Commissioners it was desirable, and indeed essential if the conference was to have any fruitful result, that there should be time and opportunity for consultation between the bodies invited to attend, and that the terms of the Commissioners' invitation rendered this impossible in the present instance. Finally, the weighty objection was made that it was contrary to the ordinary and accepted principles of public life for executive bodies holding positions of responsibility to their members, and in this case to the individual members of a great profession, to go blindfold to a private *causerie* with Government officials, with the foreknowledge that no official record of the proceedings would be kept or published. The feeling of the Council appeared to be unanimous, or practically unanimous, that to accept the invitation at this juncture would be impossible, and it was resolved at once to send a letter to the Commissioners informing them that the Council of the British Medical Association did not see its way to accept the invitation to attend such a conference as was proposed until the Representative Meeting, summoned for February 20th and 21st, had been held. This means, of course, that the question whether any conference, even an open conference with an official record, can properly be attended by representatives of the British Medical Association, is a matter for the Representative Body to decide.

The Royal College of Physicians of London received the invitation on January 25th, the day on which at an ordinary meeting certain resolutions with regard to the National Insurance Act were to be considered. Their consideration was not completed on that day, and a special meeting was held on January 30th, when, after a long debate, it was decided, as will be seen from the report in another column, that the College, while desirous of doing all in its power to promote the objects of the Act in reference to the health of the community, was not prepared to accept the invitation, since it entertained the opinion that the Insurance Act as it stands, or even after any modification in it which the Act empowers the Insurance Commissioners to make, is not adapted to secure the benefits of insurance against loss of health and the prevention and cure of sickness which it was its stated purpose to provide, and that the co-operation of the medical profession in carrying out the operations of the Act is not possible under the Act, or under any modifications of it the Commissioners are empowered to make, without inflicting grave injury on the profession.

It is altogether a mistake to assert, as some seem disposed to maintain, that the action of the College of Physicians was determined by jealousy of the larger representation proposed to be accorded to the British Medical Association, or by the alleged Toryism of the consultant class. It is, of course, true that the great majority of the governing body—that is, the Fellows—of the College are consultants, but nearly all are also members of the teaching staffs of metropolitan or provincial schools of medicine, and in taking the course almost unanimously adopted they were largely influenced by the multitude of appeals made to them by their old students now engaged in general practice throughout England and Wales. About the fact there can be no doubt. Its significance may be left to Mr. Masterman and his colleagues to interpret. At the time of writing the decision of the Royal College of Surgeons of England is not taken, but there can be little doubt what it will be, and there is every reason to believe

that the Apothecaries' Society will take the same view as the sister corporations which together form the Conjoint Board in England, Meetings of the Royal College of Physicians of Edinburgh, and of the Royal Faculty of Physicians of Glasgow, have not been held at the time of writing, but the Royal College of Surgeons of Edinburgh has come to a decision very nearly identical with that of the Royal College of Physicians of London, as has also the London and Counties Medical Protection Society.

The President of the General Medical Council has replied to the Insurance Commissioners informing them that the Council will not be able to appoint delegates to the proposed Conference, as the Council does not meet for some time; he, however, offered to supply any information desired. As has been said, the Council of the British Medical Association took a similar line—not entirely closing the door, but declining to be hustled through the portal without adequate time to consult its members, or to make sure whether it led into the Elysian fields or into Hades. The National Medical Union, the organization founded in Manchester by Dr. Helme, and the British Medical Association Reform Committee, of which Dr. F. J. Smith is the chief spokesman, have both, we understand, declined the invitation.

It is clear, therefore, that the Commissioners' proposal to hold a private conference in a hurry has ended in a fiasco as complete as it would be possible easily to devise. If the Commissioners are so ill advised as to persist in holding it, it cannot in any remotest sense be accepted as representing or expressing the opinion of the profession or in any smallest degree binding it. Those in the profession who have most vehemently criticized the Representative Meeting and the Council of the British Medical Association have dissented because, rightly or wrongly, they considered that the governing and executive bodies of the Association had not shown a sufficiently determined opposition to the feeble attempt to deal with the great question of medical benefit for the people, the preservation of the national health, and the prevention of degeneration contained in the Government's National Insurance Scheme. To a superficial observer the regrettable violence of the language employed by some of these critics may have conveyed the impression that the medical profession was rent from end to end. Those who can and will look deeper know that this opinion is not only erroneous but puerile. The profession, from the teacher-consultant class on one side of its organization to, on the other, the general practitioners who are its backbone, the men in whom the public have confidence, the men whose ministrations, whose sympathy, and whose skill make them valued counsellors in every home in the manifold chances and changes of this mortal life, are, as nearly as 30,000 men may be, unanimous in their opinion and conviction that the medical part of the scheme is bad—bad not only for them but bad for the people—and unanimous in the determination that they will not be obfuscated or bamboozled in secret conclaves.

There is, after all, such a thing as justice even in this world; though the mills of God grind slowly, yet they grind exceeding small, and we do not believe—the individual members of the medical profession do not believe—that the sense of justice and fair dealing with which every man and woman in this country is imbued, will permit a profession which has deserved so well of the people and of the State to be flouted by the Government's brand-new Commissioners or trodden under foot by the Treasury and the misnamed friendly societies.

THE INTERNATIONAL OPIUM CONVENTION.

WE are now in a position to state the results obtained by the International Opium Conference, which has been sitting at The Hague during the last two months.

The Conference arose out of the International Opium Commission which was held at Shanghai in February, 1909. That Commission adopted certain resolutions having for their object the gradual suppression of opium smoking in the Far East, the restriction of the use of opium and its derivatives to legitimate purposes, and for this purpose to regulate, by international arrangements, the production and distribution of such drugs, with a view to prevent their illicit transport or consumption.

At the request of the Government of the United States, and with the approval of the Government of the Netherlands, it was agreed by the twelve Powers which took part in the Shanghai Commission of 1909 that a conference should assemble at The Hague in December, 1911, to conventionalize the resolutions passed at Shanghai. The step was regarded as somewhat premature by His Majesty's Government, especially in view of the new arrangements which had been made between Great Britain and China with a view to the restriction and extinction of the Indo-Chinese opium traffic; but, on the understanding that the conference would deal with the growing evil of the illicit use of morphine and cocaine, and that certain reserved questions should not be included in the programme, Great Britain sent four plenipotentiaries to The Hague to take part in preparing the Convention. These were Sir Cecil Clementi Smith, Sir William Collins, Sir William Meyer, and Mr. Max Müller.

The Convention, which was duly signed by the representatives of Great Britain, America, Germany, France, Russia, Italy, Portugal, the Netherlands, China, Japan, Persia, and Siam, recites that the High Contracting Powers, being desirous of taking a further step in the direction marked out by the Shanghai Commission of 1909, and resolved to pursue the suppression of the abuse of opium, morphine, cocaine, and other drugs liable to similar abuse, recognize the need for international understanding, and are convinced that their humanitarian efforts will secure the unanimous support of all the nations interested.

The Convention then deals in three successive chapters with the case of "Raw Opium," "Prepared Opium," "Medicinal Opium," and certain alkaloids. Raw opium is defined as "the spontaneously coagulated juice obtained from the capsules of the *Papaver somniferum*, and which has only been submitted to processes necessary for packing and transfer." The participating nations resolve to enact laws to control the production and distribution of such opium, to limit the places to and from which such opium may be imported and exported, to forbid such export to places prohibiting its entry, and to control such export to places regulating its import. All packages of such opium weighing more than 5 kilograms are to bear a distinctive mark, and all import and export of raw opium are to be exclusively in the hands of duly authorized persons. Chapter II defines "prepared opium" as "the product of raw opium obtained by a series of special processes, such as solution, boiling, roasting, or fermentation, having for their object its transformation into an extract suitable for consumption, including within the term 'dross' and all other residues of smoked opium." The

Contracting Powers undertake in respect of such opium gradually to suppress its use or sale and either at once to prohibit its export or, failing prohibition, to regulate its traffic to certain places and persons, marking its package, but in no case to export it to any country prohibiting its import.

Medicinal opium is defined in Chapter III as "raw opium" which has been heated to 60° C., powdered and granulated, mixed or not with neutral substances, and containing not less than 10 per cent. of morphine. Morphine, cocaine, and heroine are also dealt with in this chapter. Here the influence of the British delegates has evidently been brought to bear, and Article 9 is highly important and far-reaching. It declares that the Contracting Powers will enact pharmacy laws and regulations so as to limit the manufacture, sale, and use of morphine, cocaine, and their respective salts to medical and legitimate uses only, unless such laws or regulations already exist. They will co-operate with one another in order to prevent the use of these drugs for any other purpose.

Then follows a series of articles indicating the mode in which the Contracting Powers will seek to enforce the control of the manufacture, import, sale, distribution, or export of these drugs, by limitation, licensing, inspection, etc., of the premises and persons where such business is carried on. Article 14, again, is of great importance; it recites that the Powers will apply the laws and regulations for the manufacture, import, sale, or export of morphine, cocaine, and their respective salts, to the case of medicinal opium, to all preparations (official and non-official, including the so-called anti-opium remedies) containing more than 0.2 per cent. of morphine or more than 0.1 per cent. of cocaine; to heroine, its salts and preparations containing more than 0.1 per cent. of heroine; and to every new derivative of morphine, cocaine, or their respective salts; or to any other alkaloid of opium which may be generally regarded on scientific investigation as liable to similar abuse.

The rest of the Convention deals mainly with the bringing into force and ratification of the foregoing.

A CAMPAIGN OF ASSURANCE.

IT was announced in the SUPPLEMENT to the JOURNAL of January 27th that a campaign, the object of which is to educate the public mind to a proper appreciation of the value of the Chancellor of the Exchequer's "Christmas gift" to the people, is to be carried on by the National Liberal Federation, with the assistance of a National Insurance Committee. It is to open on February 12th with a speech by Mr. Lloyd George reviewing the situation. He must by this time be aware that his promise of a "new earth"—created by Act of Parliament—has not excited the enthusiasm even among the supporters of the Government which his sanguine temper led him to expect. He has probably learnt that his prophetic soul, dreaming of things to come, did not take into account a factor which is essential to the successful working of his scheme. He did not seek counsel of the profession till he had determined to force his bill through Parliament, and then he asked it in the spirit of Mr. Croaker in Goldsmith's *Good-natured Man*, who was always ready to listen to reason when he was determined, because then "it can do no harm." If there has been any "revolt of the doctors," for that the Chancellor has himself and the medico-political advisers in whom he put his trust to thank. But, as his friends in the press assure us, he is not a man who readily gives in even to the hard logic of facts; so he intends to try to impose his will upon a disillusioned country. This is the situation which he has to review. He cannot be denied the praise of dogged determination; he is a fighter like Witherington in *Chevy Chase*, of whom it is told that:

> When his legges were smitten off
> He fought upon his stumpes.

Mr. Lloyd George is indeed a master of stump oratory, and he will doubtless give his admirers a fine example of that not altogether ingenuous art. It remains to be seen whether he has yet grasped the truth that, without the co-operation of the doctors, his Insurance Act in its present form can only be the ruin of an unfulfilled ambition, cumbering the ground and adding a useless burden to the already overloaded shoulders of the taxpayer. He has been lavish in explanation of his scheme, but the mystified public would doubtless be glad if, as Byron says, he would explain his explanation. Before attempting to educate the people he would do well to educate his spokesmen; otherwise the campaign will be a failure. The sharpshooters whom he has thrown out in various directions to prepare the way for the attack in force have wasted a good deal of powder and shot on the doctors without making any impression on their position. Some specimens of their methods of attack may be interesting.

The Right Hon. C. E. H. Hobhouse, Chancellor of the Duchy of Lancaster, in an address to representatives of friendly societies at Bristol, said that nobody had a greater respect for doctors than he had, but he thought a number of them had made a mistake. It is significant, in view of the composition of the audience, that this statement was received with expressions of approval. Mr. Hobhouse went on to say that the medical profession, led apparently by gentlemen who had not much acquaintance, he imagined, with actual practice amongst the class of persons who were going to be insured, vowed they would not work the bill. He had it on the authority of doctors engaged in friendly society work in East Bristol that under the Act they would be paid 50 per cent. better than at present. This statement, too, was received with cheers—a fact which seems to show that the friendly societies are aware that they have not paid their doctors sufficiently in the past, and that they are quite willing that the deficit should be made up out of public money. Mr. Hobhouse added that when doctors told him they would not work the Act he thought they were actuated by hostility to the Government and the Act, or they did not know in the least the conditions under which they were asked to carry on their business. Now, we may fairly ask Mr. Hobhouse what reason he has for saying that doctors are actuated by hostility to the Government, of which many of them are supporters, or to the Act, which they welcomed at first like the morning standing tiptoe on the misty mountain tops of the Chancellor's eloquence. It is not their fault that, as the haze cleared away, the prospect of the coming day became less glorious. Again, with regard to their knowledge of the conditions under which they were asked to carry on their business, does any politician really expect people to believe that the doctors know less of their business than he does? The fact is that the more the bill has been studied and the more it has been put before the profession in every detail by ourselves and others, the more its manifold imperfections and injustices have become visible. Mr.

Hobhouse and other speakers who take the same line should take the trouble to find out the facts before they make rash assertions. It is not gentlemen who have not much acquaintance with practice among the class of persons to be insured who a e leading. It is men who know from experience exactly what service they are asked to render, and with full knowledge are determined not to accept the offer unless they get fair play. There has been no time probably in the history of the profession in this country when they were more united. It is not alone the British Medical Association, but the colleges and universities, which seldom trouble themselves about such sublunary matters, and the General Medical Council—in fact, every body representing any section whatever of the profession, that has joined in the resistance to the Chancellor's hasty and ill-considered legislation. Any differences of opinion which Mr. Lloyd George may flatter himself he has been able to excite are only on side-issues. In disapproval of the Act we may say the whole profession is solidly united. The degree of disapproval may, of course, vary, but in the mass it is quite plain that the profession will have none of it. Mr. Hobhouse's remarks seem to be an apt illustration of the "fossil Radicalism," as to which Mr. Frederic Harrison has recently told us that its idea that soft words can dispel the Teuton wrath is childish ignorance of real fact.

At Tredegar, Mr. T. Richards, M.P. for West Monmouthshire, was good enough to address a solemn warning to the doctors. He is a member of the Labour Party, and, like most of his brethren, seems to object to working men contributing anything whatever towards the preservation of their own health. He said the difficulty they contemplated was not with the Insurance Commissioners or with the local Health Committees, but with the medical men. Referring to the cardinal principles laid down by the British Medical Association, he said the £2 limit was impossible, and would never be conceded by the Tredegar colliers. They had always looked up to the medical men, but if they adopted the attitude of trade unions, they must expect the treatment meted out to trade unions. If the doctors chose to fight with these weapons, they must be prepared to be fought with them. He believed working men generally were prepared to treat their doctor as a gentleman, and to pay him decent wages. This is very gracious of the working man, but the "wages" he has so far paid could hardly be described by the word "decent," and it is plain from the utterances of those who profess to speak in his name that he objects to the compulsory principle altogether, and wishes that whatever wages the doctor may get shall not come out of his pocket. Mr. Richards went on to say that the doctors had something to lose in this matter. Unless they were prepared to work in conformity with the Act, any doctor who was registered could come to Tredegar and insist upon being put on the medical panel. He hoped that when the schemes were approved, the medical men would carry out the arrangement. That, we may say, must depend on what the arrangements are. One thing Mr. Richards and other champions of friendly societies should endeavour to realize, and that is, that the day of club practice under anything like the old conditions is over. It is possible that the working man may get doctors at the lowest wage, but he will find sooner or later that it is a false economy to sacrifice efficiency to cheapness.

Another Labour member—Mr. George N. Barnes, M.P. for Blackfriars, who, we see, has just been appointed a member of one of the numerous committees which are springing up around the Commission like the men from the teeth sown by Cadmus—speaking at Dundee, said the doctors had taken a most mercenary view of the Act. They had fallen upon it vulture-like to extract as much meat out of it as they could get. Politicians, of course, are never mercenary, and it must be very shocking to the mind of the Labour member to whom virtue is always its own reward to find that all doctors do not consider it a sacred privilege to attend the working man for nothing.

At the annual dinner of the Court "Duke of Cornwall" of the Ancient Order of Foresters, held at Oxford on January 19th, Bro. T. C. Hewitt said that in that city he did not think there was a society now which paid more than four shillings a member to the doctor. And, he added, if there was a vacancy in the Courts for a medical man, two or three doctors and the very best men came forward and applied to fill the vacancy. Did that look as if the friendly societies did not pay the doctors fairly? Under the Act they would get 6s. per head. If the doctors said that was unjust to them, were members of friendly societies to believe that all these years they had been 'baled out with coloured water'? Were they to believe that the doctors had not properly attended to them, or that they had not been remunerated fairly at four shillings? The doctors supplied drugs, and had always supplied drugs for this four shillings; and, under the same conditions, for six shillings they would supply just the same as before. He challenged the doctors to deny that fact. In addition to the ordinary membership a doctor would get three times the number of members, and wouldn't a man be prepared to lower rather than to increase if he had three times the amount of business which he usually did put in his way? Bro. Hewitt does not seem to see that this is an argument against rather than for the Act. The chief complaint of the profession against the present club system is that it is impossible to do the work efficiently on the terms offered. If a man is to have his patients increased threefold, or, as Bro. Hewitt puts it, if he is to have three times the amount of business he did before, it may be assumed that he will do it three times worse. This is no reflection on the club doctors, who do their best. It is a simple statement of the limitations of human power. Bro. Hewitt went on to say there would be no bad debts, and, carried away by his eloquence, he went on to give a solemn warning to the doctors. If, he said, they went on strike, let them remember this: That there were other laws beside the Insurance Act. Did they think Englishmen would stand by and see a poor brother neglected or a doctor refuse to attend him? No: the nation would be up in arms at once. Perhaps by this time Bro. Hewitt has cooled down, and has had time to reflect that there is no law that compels a doctor to give his services except on his own terms, any more than a grocer or a baker is compelled to sell his wares except at a profit. The nation might, as he says, be up in arms; but the nation might turn its arms not against the doctors but against log-rolling politicians. When Bro. Hewitt goes on to say that the doctors' action is unworthy of their profession he is talking nonsense, and he becomes more absurd as he proceeds: "Members of friendly societies could say the very same thing of the doctors if they wished to. They could say they were out to wreck the Act unless they were paid for everything they did. Three-fourths of the members of friendly societies to-day were working for the love of the thing" (he does not say what the thing is, but we have no doubt that they have good reason to love it), "and if it were not for them the Act could not go on. Therefore," he said, it was a dis-

grace to the medical profession for them to have adopted the attitude they had." This statement was received with applause. To people who, like Bro. Hewitt, want doctors to work for the love of the thing, it is doubtless natural to think it a disgrace that the men without whose assistance the friendly societies would speedily dissolve into thin air should require something like an equivalent for their work.

At a mass meeting of members of the Municipal Employees Association held at Leicester, Mr. Richard Davis, General Secretary of the Association, said no friendly society had ever given anything like the medical attendance to its members that the insured were to have now. The efforts of the doctors to get Mr. Lloyd George to rob the workers by diminishing the benefit did not matter. The benefits were there, and they, the insured, were assured of them. Here we may venture to ask, How are they assured of them if the doctors do not consent to play the part of flies to the Treasury's spider? Mr. Davis went on to say that the doctors wanted the income limit lowered so that they could have larger private practices. It appears to surprise this worthy gentleman that such a wish should be felt by any one. We wonder—if we may do so without impertinence—if he would object to receive a larger salary? He told his audience that if the whole of the work for the doctors was divided out equally, every doctor would have six pounds a week. He prudently refrained from hinting at the amount of work that would have to be done for this princely sum.

Addressing his Derby constituents on January 10th, Mr. J. H. Thomas, M.P., said the action of the doctors over the Insurance Act should be taken to heart by the workers, who would be certain to profit by the lesson. This is somewhat cryptic, but it seems to imply a threat of some kind. We should be inclined to put it the other way. The doctors are only now beginning to profit by the lesson they have long been receiving from the "workers." We may say, by the way, that it must strike a doctor, who has no limitation of hours day or night and has often hardly time for meals, as strange to see the class that wishes to limit the output and reduce the labour of every working man to a dead level, quietly arrogate to itself the title of "worker." It is high time that the "workers" should learn the lesson that the men who really deserve that name are those who give themselves to their labour without stint. Mr. Thomas went on to say that the doctors belong to a class of society which usually denounced the working-class organization, but they had put the workers up to methods of attack for which they might have reason to be grateful. What this means we do not pretend to understand, and certainly we can afford to contemplate with perfect equanimity any "methods of attack" which the working-class organization may choose to adopt. If that organization has been denounced by doctors it has not been for any other reason than that they have so long been ground under the heel of friendly societies. Mr. Thomas added that in spite of the doctors' opposition, much of which was actuated by purely political motives, the Act would work, and as a trade union leader and an old friendly society member he did not hesitate to say that it would benefit the workers. The prophecy may be taken for exactly what it may be worth, but we may ask what reason Mr. Thomas has to think that much of the doctors' opposition is actuated by purely political motives. If the Act is, as some of his colleagues believe, to make the doctors' condition better than it has been, the doctors would certainly not allow political motives to stand in the way of such benefit. It is precisely because the benefits are given to a large section of the population at his expense that the doctor objects. This is not politics but practical common sense.

Lastly, we have Mr. J. M. Robertson, of Tyneside, again. Only the other day he attributed the opposition of the doctors to the Act to the fact that they were mostly Tariff Reformers. Now he says it is not due to Toryism but to "panic." As he admitted at the same time that they "were the only fear"—in regard to the working of the Act—it would almost seem that the "panic" is on the other side.

We have given these specimens of the tactics of Mr. Lloyd George's sharpshooters, as it is well the profession should know how the fight is being carried on. The reason for all this wrath directed against the doctors is not far to seek. A politician wishing to gain a reputation as a philanthropist devises a scheme which he supposes will please a large number of voters. These naturally accept the promised benefit with eagerness, and can see nothing but selfishness and self-seeking when the men who are to be the agents of the Chancellor's vicarious bounty—not being able to live by philanthropy alone—venture to ask that their interests should be considered. Did not Sydney Smith say long ago that charity was exemplified by Smith expressing the opinion that Jones really ought to do something? Mr. Lloyd George goes further. He wishes to compel Jones to do something, for which he himself is to get the credit.

THE COUNCIL'S REPORT ON THE INSURANCE SCHEME.

The meeting of the Council of the British Medical Association on Wednesday last did a great deal of important business. It sat from two until past eight o'clock, and during the whole of this time the tension of business was relaxed only for a few minutes when the councillors were permitted to revive their energies with the cup which cheers but not inebriates. We have referred in the first article in this part of the Journal to the decision reached, without hesitation or any prolonged debate, to decline to take part, at forty-eight hours' notice, in a private conversation with the Insurance Commissioners and certain medical bodies which the Commissioners had thought proper also to invite. The Council spent much time in the revision of the Report[1] to the members of the Association for consideration in the Divisions in preparation for the momentous meeting of the Representative Body, which has been summoned for Tuesday and Wednesday, the 20th and 21st of this month. The Report is not so long or involved as some of the documents previously put forth, and we venture most earnestly to appeal to all members of the Association to study it carefully, and to form an opinion, subject to discussion with their fellows in Divisional meetings, on the validity of the recommendations with which it concludes. Looking at it as impartially as possible, it seems a document as free from bias as could have been put forth, and to contain the outline of a policy which the profession should consider with an open mind. It contains, as was to be expected, a vindication of the Council's action, as the executive of the Association, from the aspersions which have been cast upon it. Whatever mistakes have been made—and the man, as Napoleon said, who makes no mistake makes nothing—the question now is whether we cannot close our ranks, and whether the members of the Association cannot within the next fortnight give such instructions to their Representatives as will ensure that the Special Representative Meeting shall

See Supplement this week.

formulate a policy on the basis of this Report, of the Act,[2] and of the scheme as a whole.[3] The Report at least puts in a clear light the chief defects in the Act and in the scheme considered as a whole, and makes recommendations which will afford opportunity for the discussion by the Representative Meeting of every defect, even apart from motions which the Divisions will formulate for its consideration. A motion made in the Council to delete all the recommendations received a good deal of support, partly on the ground that the Council ought not to give any semblance for the charge which might conceivably be made, that it was seeking to dictate to the members and the Divisions, and partly on the somewhat different ground that it had been alleged that, at previous Representative Meetings, there had been a disposition to give an undue preference and prominence to motions proposed by the Council. This opinion did not prevail in face of the contention that the Council would fail in courage and in its duty to the Association and the Representative Meeting if it did not submit for free discussion its considered opinion on the attitude which the profession should now assume towards the Insurance Commissioners, the Treasury, and the Government, and the policy which at this stage of the development of the National Insurance Scheme should be adopted.

THE MEDICAL SECRETARYSHIP.

THE Council at its meeting on Wednesday had before it a report from the Finance Committee on an instruction to consider and report to the Council as to the filling of the vacancy in the office of Medical Secretary and the whole question of the staff of the Medical Secretary's department. The committee reported that it had invited applications by advertisement, that thirty-one names had been sent in, but that there had not been time adequately to consider them. The committee recommended that it should be authorized to report at the next meeting of the Council, special or otherwise. A discussion ensued, in the course of which it was urged that it would be more businesslike to ask the Finance Committee to make its report on the Medical Secretary's department, which it seemed generally to be considered stood very much in need of organization, before the Council was called upon to fill the vacancy. During the discussion several tributes to the services already rendered by the Acting Medical Secretary (Dr. Cox) were received with marks of approval, and eventually it was agreed that the Finance Committee should make a report on the organization of the Medical Secretary's department, and that this report should be in the hands of the members of Council early enough to enable them fully to consider it before the next ordinary meeting of the Council, which will be held in April, and at which it was proposed the appointment should be made.

RESEARCH DEFENCE SOCIETY.

A BRANCH of the Research Defence Society was founded in Leicester at a meeting of influential citizens held on January 20th. Mr. C. J. Bond, F.R.C.S., occupied the chair, and was supported by Mr. Stephen Paget. Among the others present were Sir Edward Wood, the Mayoress (Mrs. Tollington), and Mrs. A. E. Lenard. The Chairman in explaining the aims and objects of the meeting, said that fortunately, and unfortunately, they heard many arguments put forward against performing experiments on animals, and it was desirable that the other side and the advantages of vivisection should be placed before the public. There were many who conscientiously held opinions opposed to the aims of the society. He believed that it was right to approach all suffering in an attitude of inquiry. People should be concerned as to suffering in animals and in human beings, and the higher in the scale of living the more concerned they should be, and especially when it affected human beings. When one thought about the way in which some people treated their little pets, one sometimes wondered whether people placed the interests of their fellow creatures in front of their pets. There were two reasons why some hesitated to support vivisection. The first was whether there had been any real benefit from such experiments, and, secondly, whether there were proper restrictions to prevent unnecessary suffering. Twenty years ago he performed experiments upon animals, and was willing to take his share of abuse which came to all who had performed experiments of that kind, but he was not prepared that that matter should not go on, by default of people being ignorant of the benefits to be derived. Mr. Bond then introduced Mr. Paget, who, in the course of his address, traced the growth of the vivisection movement from the 1875 Royal Commission up to 1908, when the Research Defence Society was formed with seven members. Now the membership numbered over 4,800. The society had nothing to do with working experiments on animals, or in advising the Home Office. It had nothing to do with any movement for the restriction or abolition of experiments. The society was, foremost, a publishing company, and was desirous of keeping the facts before the public mind. In 1911 no less than 120 address and lantern lectures were given and much literature distributed. Referring to experiments, Mr. Paget said that experiments in bacteriology made up 95 per cent. of the experiments upon animals. Not only human beings, but animals derived much benefit from the experiments. Animal diseases were better treated as the results of information gained by experiments. People had benefited because the medical men were able to trace the source of infection. He would not say a word against antivivisectionists, but when one studied the sort of literature they spread broadcast, and thought of what would have happened had they had their way thirty years ago, and of all the lives that had been saved by the results of the experiments, he thought one had a right to be impatient and ask the public to hear what the work of the Research Defence Society was in the saving of human and animal life, and what they owed to the man of science. On the motion of Dr. Astley Clarke, seconded by Mr. Bratley, it was decided to form a branch of the society in Leicester. On the proposition of Dr. Pope, seconded by Sir Edward Wood, a cordial vote of thanks was accorded Mr. Paget.

SURGERY AND SOCIAL REFORM.

LOMBROSO's theory of the "criminal type" has now fallen into discredit. For ourselves we never accepted his teaching, which put us in mind of "Hamlet's aunt" in *David Copperfield*. That lady, it may be remembered, had a strong belief in an aristocratic type. "We see Blood in a nose and we know it. We see it in a chin, and we say, 'There it is! That's Blood!' It is an actual matter of fact; we point it out. It admits of no doubt." In like manner Lombroso taught us to see, let us say, arson in the ear, rape in want of symmetry in the face, and murder in the shape of the skull. Had Lombroso's theories been generally accepted, few would have escaped hanging except those cunning or lucky enough not to be found out. The physiognomy, of course, is often an index of the character, and the physical peculiarities noted by Lombroso are part of the physiognomy. The error made by his school lay in the fact that they believed that these physical peculiarities were not merely the "notes" of a criminal tendency, but were structural conditions by which an actual criminal could be recognized. It is related of Socrates that some Lavater of ancient Athens meeting him in the street said that his face bore all the

[2] SUPPLEMENT, January 6th, 1912.
[3] BRITISH MEDICAL JOURNAL, January 20th, 1912, p. 149; and SUPPLEMENT, same date, p 62.

marks indicating gross sensuality. When his disciples seemed disposed to resent what they considered an outrage on their revered master, Socrates stopped them and said it was true that the passions expressed by his physiognomy were inborn in his nature, but he had been able to repress them by the force of his will. A *face patibulaire* does not indicate that its possessor will end his days on the gallows in expiation of crimes committed. We note that an American judge has recently pronounced an *obiter dictum* from which we gather that in his belief the physical coefficient of crime is to be found in the conformation of the throat. Judge DeLacy of the Juvenile Court of Washington states that he has had eminently satisfactory results from the treatment of juvenile criminals by sending them to the hospital instead of to the reformatory. He says that incorrigible, lazy, backward and criminal children have been cured of their bad habits by surgical operations. Doctors who have investigated the condition of the children sent to them by the judge who makes medical examination almost a regular part of the court work, have discovered that many of them are the subjects of disease of the throat, ear, or eye. They become abnormal through pain or nervousness. They fall into mischief and become criminals, not because they are naturally evil, but because of physical conditions, amongst which enlarged tonsils and adenoids hold the first place. Such children have trouble in breathing, become high strung and weak physically, and are so irritable as to be beyond control. When the adenoids are removed the children usually become normal again. The judge, it is said, has enlisted the co-operation of some of the leading surgeons and physicians of Washington. We make no doubt that many backward and incorrigible children suffer from enlarged tonsils and adenoids. These conditions, as is now well recognized, produce the state called by the late Dr. Guye of Amsterdam, *aprosexia*, which means the want of power of concentrating attention. Moreover, in many of these children the hearing is imperfect, and the inadequate oxygenation of their blood produces a state of lowered vitality. All this interferes with their education. Further, the surroundings in which many of them live are insanitary and depressing, and they are constantly exposed to be witnesses of various forms of vice and violence. The moral environment produces viciousness as the physical environment begets disease. It seems a confusion of cause and effect to attribute the vice to obstruction in the throat. Many children of the well-to-do classes suffer from the same physical conditions without showing criminal tendencies. We should be glad to accept Judge DeLacy's simple etiology of crime. It would greatly simplify the problem which is now exercising social reformers so much, and a return to the state of innocency from which Adam fell would be cheaply bought by the sacrifice of any number of tonsils and the removal of adenoid growths. What a virtuous world it would become in a few years if crime could be thus exorcised by surgery! When one looks back across the waste of centuries during which the human race has wallowed in every species of iniquity, one must deplore the fact that the true cause of crime remained so long a mystery as impenetrable as that of the source of the Nile. Even twenty-five years ago one used to hear physicians of the highest eminence vehemently deny the existence of adenoids and denounce those who professed to remove them as quacks of the worst kind. The whirligig of time brings in strange revenges, and it would be curious if the leaders of the profession in the Eighties could revisit the earth for a short time to see into what mountains the molehills of which so much fuss was made have grown. What would they feel if they could see that the despised throat specialist was being hailed as a powerful instrument of social reform? To speak seriously, while we do not by any means believe that the millennium is to be brought about by the removal of adenoids, we hail with deep satisfaction the recognition by a high judicial authority of the simple truth that physical conditions have much to do with criminality. If virtue should not, as the French lady said, be altogether a matter of climate, it is certainly, to a greater or less extent, a matter of physical constitution. But the tonsils and adenoids do not cover the whole ground. Any state of the body which lowers the health and causes irritability must necessarily react on the character, and, *pro tanto*, predispose to crime. The time may come when the surgeon may be the saviour of society—when, for instance, by opening the skull he may be able to remove a cause of disordered judgement, and by so doing restore mental equilibrium, and give the self-control which prevents men from following the criminal instincts that lie hidden in the deepest recesses of human nature; or by short-circuiting the colon may free them from the gloom and fanaticism that are often the outward expression of imperfect intestinal sewerage.

THE MECHANICAL FACTOR IN DIGESTION.

IN spite of all that has been published on the results of radiology in demonstrating the motor functions of the various portions of the alimentary canal, its practical application is by no means so general as its extreme utility deserves, and we welcome such demonstrations as that which Dr. Hertz gave recently at a meeting of the Brighton Division (see p. 225), because they help to spread a better knowledge of what radiology can do in this respect, and to impress upon practitioners the urgent need there is for seeking the assistance of a radiologist in the diagnosis of diseases of the alimentary canal. It is not going too far to say that a preliminary radiological examination after the ingestion of a bismuth meal would prevent many exploratory incisions being made, and would give to others a more definite character and purpose. The surgeon would know what to expect, and he would be able to plan his procedure in accordance with his knowledge of the pathological condition present; it would, above all, diminish the number of useless operations for inoperable cancer; and, although it cannot help us in the early diagnosis of this disease, it can give absolutely sound data for operating when a tumour can be demonstrated. Callous ulcer in its early stages can be recognized, and when other symptoms are present radiology illuminates many of the darker shadows of the diagnostic problem. In constipation radiology distinguishes between the atony which involves the whole colon and that in which the pelvic portion only is concerned. The importance of the mechanical factor in digestion is, perhaps, not sufficiently appreciated. So long as the motor functions of the alimentary canal are undisturbed, there are no subjective sensations of discomfort while, on the other hand, muscular atony is the parent of the lengthy catalogue of troubles which the "nervous dyspeptic" pours out to his sympathetic doctor. It is of the utmost importance to recognize and to relieve these ailments, and the former, at least, is made possible by radiology.

INTERNATIONAL CONGRESS ON TUBERCULOSIS.

THE eighth International Congress on Tuberculosis, which was to have been held in Rome last autumn, will meet next April (14th to 20th). The Congress is under the patronage of the King and Queen of Italy, and the President is Professor Baccelli. The work will be divided into three Sections as follows: I, Social Defence; II, (*a*) Medical Pathology and Therapy, (*b*) Surgical Pathology and Treatment; III, Etiology and Epidemiology. In the first section the following subjects will be discussed: Associations, sanatoriums, and kindred institutions in the struggle against tuberculosis, with special reference to the development of children and adolescents; the notification of

tuberculosis; the sanitary police of dwellings in the prevention of tuberculosis; home work in manufacturing towns in relation to tuberculosis; tuberculosis and the school; preventive and curative institutions as factors in social defence against tuberculosis; the part played by woman in the prevention of tuberculosis in the family; alcoholism and tuberculosis; tuberculosis and emigration; tuberculosis and the Red Cross. In Section II (*a*) the subjects for discussion are: The influence of locality on the course of tuberculous diseases; the significance of physical changes in relation to the anatomo-pathological modifications of the lungs in tuberculous diseases of the air passages; latent tuberculosis and its diagnosis; the early diagnosis of tuberculosis in relation to its prophylaxis in the army; the *x* ray in the diagnosis of tuberculous diseases; the applications of the discoveries relative to immunity to the clinical study of tuberculosis—(*a*) the raising of the resistance of the human organism to tuberculosis; (*β*) active specific therapy of tuberculous diseases; (*γ*) the treatment of tuberculous disease by specific serums—artificial pneumothorax in the treatment of tuberculous diseases; solar radiation in the treatment of tuberculous diseases; the time for the induction of premature labour in the course of pulmonary tuberculosis. In Section II (*b*) the programme includes the following subjects: The importance of seaside hospitals and of mountain-air institutions in the treatment of surgical tuberculosis; the importance, the limitations, and the time for intervention, operative or other, in surgical tuberculosis; the surgical treatment of abdominal, especially gastro-intestinal, tuberculosis; the surgical treatment of the genital apparatus—(*a*) male, (*b*) female; the treatment of tuberculosis of the urinary apparatus. In Section III the programme is as follows: Human in relation to bovine and other forms of ancient tuberculosis; tuberculosis and milk; the channels of entrance and diffusion of the tubercle bacillus in the organism; modifications of the biological properties of the tubercle bacillus in the medium and in the organism; etiological importance of social factors in tuberculosis; tuberculosis in communities (schools, workshops, barracks, etc.)—(*a*) tuberculosis in armies, (*b*) tuberculosis in relation to recruiting; the epidemiological course of tuberculosis in relation to the means of social defence. In the list of those who are to open these discussions we find the names of Dr. Niven (Manchester), Dr. Robertson (Birmingham), Professor Sims Woodhead and Dr. Griffith (Cambridge), Dr. Theodore Williams, Dr. Heron, and Dr. Corner (London), and Dr. Scurfield (Sheffield). Four general addresses are to be delivered before the congress, and we are glad to note that the Organizing Committee has selected Dr. Philip (Edinburgh) to be one of the four orators, in recognition of the leading part he has taken in the fight against tuberculosis. All communications relative to the congress should be addressed to the Secretariate, via in Lucina, 36, Rome.

THE BRITISH MUSEUM LIBRARY.

THE controversy in which the readers of the *Morning Post* have been indulging as regards the British Museum library is so essentially one in which, as matters at present stand, medical men will take little interest, that there is good reason to regard the criticism levelled against the authorities as wholly or in part justified. The unfortunate fact is that medical men as a class do not attempt to make any use of the unique facilities which the museum library affords. This is partly because of the special facilities which the College of Surgeons library, with its now almost completed subject index, and kindred institutions are able to offer, but even more to the inadequacy of the arrangements which are made by the authorities at the museum. In medicine, perhaps, even more than in other sciences, it is essential to get hold of the literature as soon as it is published; the importance of periodicals is equal if not superior to that of books, and at the museum periodicals are not available until after they have lost their freshness. Nor is any serious attempt made to ensure that the books on the reference shelves should be thoroughly up to date. An even more serious charge is brought against the library by those who have attempted to make use of it in connexion with the history of medicine. The researcher may go to the Surgeon-General's Catalogue and laboriously enter up slips for those books which he hopes may prove of value to him in his work. In an unpleasantly large number of cases he finds that the books and periodicals to which he wishes to refer are not in the collection. This should not be the case. A national collection should aim at being superior to the specialized collections of books which are made by the societies interested. Their function is to get together libraries as complete as they can with the funds at their disposal, and, their size making them more convenient, to act as the first source to which members apply for information. It is for the national collection to supply the deficiencies. The chief failings of the museum, to which attention has been called in the columns of our contemporary, appear to be: The rigid constitution of the museum, the virtual restriction of posts in the library to Oxford and Cambridge men, the absence of a subject catalogue, the gaps in the collection, the unsatisfactory way in which the rights of the museum as regard copyright English books are enforced, the extravagant and curious methods by which foreign books are purchased, the unnecessary delay which elapses before a reader gets the books which he has requisitioned, the cumbersome machinery necessary before provincial newspapers can be consulted, the short hours during which the library is open to readers, and the absence of a periodical room. Those who have had any experience of the courtesy with which the staff attempts personally to meet the wishes of the readers, and who know the self-sacrifice with which many of them discharge their duties, will be glad to notice that the criticism has developed chiefly along two lines—that the constitution of the trustees is not such as to suggest that the museum should be efficiently administered, and that the Treasury and the Government are to blame for the way in which the museum is starved. It is a matter almost of common knowledge that if a member of the staff suggests a reform that will involve a slight increase in expenditure he is apt to get severely snubbed for his pains. Altogether a good case seems to have been made out for an inquiry. The British Museum, with its library, is far too valuable an institution for the nation to allow it to be worked at anything less than its utmost capacity.

TREATMENT OF LEPROSY.

AT two of the Indian asylums of the Mission to Lepers new remedies are at present being tried. A supply of bacterial extract, prepared by Dr. Bayon at the Lister Institute of Preventive Medicine, has just been forwarded to the Calicut Asylum, where it will be applied according to his instructions by Dr. Stokes, the superintendent. The preparation is analogous to tuberculin, and made from a culture originally isolated by Professor Kedrowsky, of Moscow, from cases of leprosy. This organism has been carefully studied by Dr. Bayon by experimental and modern serological methods, and he is of opinion that it is identical with Hansen's bacillus. At Champa, in the Central Provinces, Dr. T. C. Rutherford is experimenting on thirty cases with a new antitoxin. While old and well-recognized palliative remedies are employed at all the society's asylums, facilities for experiment with new and improved forms of treatment are gladly afforded by the Mission, whose organizing secretary is Mr. John Jackson, 33, Henrietta Street, Strand, W.C.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

WALES.

THE PROFESSION AND THE INSURANCE SCHEME.

WITH the view of arranging concerted action in Wales, a meeting of the Presidents of Branches and Chairmen of Divisions and of the Honorary Secretaries of Branches and Divisions in Wales, together with the Welsh members of the Representative Body has been arranged. It will be held on Friday, February 9th, at Shrewsbury, as the railway facilities make that city the most convenient centre for a meeting at which North, Mid, and South Wales are all to be represented. The meeting will be invited to resolve itself into a Welsh Medical Committee, for the general purpose of promoting the organized union of the medical profession throughout Wales, in order to protect the interests of the profession and to strengthen the bonds of fellowship. It will be proposed that the Committee when formed should invite the co-operation of members of the profession in Wales who do not at the present time happen to hold any of the offices in the Association above enumerated; it is the desire to act through and with the Association, and in particular to seek to extend its membership in Wales, so that it may include every member of the profession in the Principality. The meeting will be invited to reaffirm the six cardinal principles of the Association, and to ask all the Divisions in Wales to convene meetings of the profession, and to invite medical men who are not yet members to attend. At these meetings the cardinal principles will be submitted for reaffirmation, and the terms on which medical men may be willing to accept service under the Act will be discussed. It will also be proposed that the Welsh Medical Committee when fully constituted shall appoint an executive committtee to communicate with the Board of Commissioners for Wales, and to inform them that the profession in Wales will absolutely refuse to work under the Act unless the scheme of medical benefit is consistent with the six cardinal principles, should this, as is confidently anticipated, be the resolve definitely formulated by the meetings of the Divisions in Wales. Preliminary inquiries have shown the utmost unanimity on general principles, and as to the propriety of the course proposed to initiate the movement. The meeting on Friday next will be held at the Raven Hotel, Shrewsbury, at 2 p.m.

WELSH HANDBOOK OF THE INSURANCE ACT.

The National Health Commissioners for Wales have appointed Mr. Beriah G. Evans to take charge of the official insurance literature for Wales, both English and Welsh. The Commissioners intend to issue a quantity of literature in both languages to explain the Act. Mr. William George, who is preparing a Welsh handbook of the Insurance Act, recently offered a prize of one guinea for the best Welsh idiomatic translation of the principal technical terms and phrases in the Act. There were fifty-one competitors, and the prize has been awarded to Mr. J. Bodvan Anwyl of Pontypridd, the brother of Professor Sir Edward Anwyl.

WELSH NATIONAL MEMORIAL.

A very large meeting was held on January 23rd at Shrewsbury, under the chairmanship of Mr. David Davies, M.P., for the purpose of considering the position of the Welsh National Memorial under the Insurance Act. The Chairman briefly reviewed the origin of the movement to form a Welsh memorial to King Edward VII, and the steps which had been taken to establish a large fund for fighting consumption in Wales and Monmouthshire. A large sum had been subscribed, the amounts from the various counties and boroughs being as follows:

Breconshire	£4 054	Monmouthshire	£10,920
Cardiff	6,311	Newport	1,187
Cardiganshire	344	Pembrokeshire	692
Carmarthenshire	349	Radnorshire	3,782
Glamorgan	16,895	Swansea	7,059

These amounts, added to other donations, made the total fund £198,000 at present, but when the Chancellor of the Exchequer introduced the Insurance Bill the subscriptions to the memorial at once fell off. The Executive Committee decided that the best way to induce the public to continue subscribing would be to get an amendment of the bill which would give the control of sanatoriums in Wales and Monmouthshire to the Memorial Committee under a Royal Charter. The bill had been amended so that the Insurance Commissioners for Wales had been appointed, and the powers of the Local Government Board with respect to the distribution of grants in aid of sanatoriums and similar institutions would, as regards Wales and Monmouthshire, be exercised by the Welsh Commissioners. A subsection provided that an association for providing sanatoriums, etc., be formed under Royal Charter. The effect of the new provisions would be as follows: (1) One association representative of all classes and all public bodies would control Welsh sanatoriums. (2) The Welsh Commissioners would have power to make grants to the association for the building of sanatoriums. (3) The association would be able to arrange with local Insurance Committees for the treatment of insured and uninsured tuberculous patients in their area. The association had already begun its work. The West Wales Sanatorium, and the Open-air Home at Treborth had already been taken over, a travelling tuberculosis exhibition was touring Wales, and twenty-five nurses were being specially trained. Dr. M. S. Paterson had been appointed Medical Director of the association, and he was now working out a scheme for effective treatment of consumption, with the co-operation of medical officers of health and others. In conclusion Mr. Davies made an appeal, especially to public bodies, to provide the amount remaining to bring the fund up to £300,000. On the proposition of Lord Kenyon, it was with acclamation carried, that Mr. David Davies be appointed the first chairman of the chartered association, to hold office for life.

LIVERPOOL.

MEDICAL STUDENTS' ANNUAL DINNER.

THE medical students' annual dinner was held on Saturday, January 20th, at the Exchange Station Hotel. Dr. T. R. Bradshaw presided, and Mr. D. Douglas-Crawford was vice-chairman. There was a full gathering, and old students were well represented. The speeches were to the point and happy in sentiment. An excellent musical programme had been arranged, and altogether the evening was a great success.

LIVERPOOL LITERARY AND PHILOSOPHICAL SOCIETY.

On January 22nd, at the Royal Institution, and under the auspices of this society, Professor E. W. Hope, M.O.H. Liverpool, read a practical and much appreciated paper on "Some of the Great Sanitary Operations in Liverpool and their Results." He dealt with the fall in the death-rate of Greater Liverpool from 24.8 in 1895 to 17.4 in 1910. There were 3,000 fewer deaths in Liverpool in 1910 than in 1895, although the population had increased 115,000. The diminution in deaths also meant a diminution in sickness. Wherever a community could be educated to understand that sanitary progress promoted commercial progress, the path of the sanitarian was made comparatively easy. The eventful history of tropical sanitation proved this, as did international agreements as to quarantine. The modern methods of medical inspection of ships, and the consequent minimum of interference with commerce, had been rendered possible by a closer study of the nature of infection and the diffusion of knowledge. He drew attention to the education not only of the people, but of statesmen who controlled in these, as in other matters, the destiny of nations, and referred to the education of the people as to the desirability of purity of water supply, the transmission of disease by vermin, flies, and other insects, and as to the need for pure and healthy food and milk. All efforts towards sanitation had met with opposition, but the results were such that only the most ignorant reactionary would wish to recall the old conditions; but the public forgot the old conditions and accepted improvements as a matter of course, so that it was necessary to keep alive a general interest in sanitation. Further, the universities must take care that the training for their diplomas in public health shall be good and the facilities adequate, with degrees and diplomas of a

high order. As to the question of sanitation and eugenics, Professor Hope said that sanitary measures made it easier for the fittest to survive.

THE UNIVERSITY.

After a short absence from Liverpool, due to ill-health, the Vice-Chancellor, Sir Alfred Dale, has been warmly welcomed by the council and his university colleagues on his return in restored health. The School of Social Science continues to do good work, and has arranged a valuable programme of lectures and classes for students interested in the study of social problems. The election of Mr. Sydney Jones as a member of the City Council is another link in the chain which binds the city and university together. It is to be hoped that he will become a member of the Education Committee. Funds are urgently needed towards the erection of the new building for the University Settlement. The settlement is capable under the best conditions of doing much to assist the solution of the grave problem of poverty in Liverpool. Mr. F. Marquis, the warden, will give any information, and will acknowledge donations. The university now offers courses for a special degree in commercial science (B.Com.Sc.). It will be of considerable value to students who purpose following a business career after university life, for it is hoped that special consideration will be given to holders of it by business houses. The course is of special value to those who purpose entering the Government consular service.

Dr. A. Bernard, after ten years' service as a lecturer in the medical faculty, has resigned. His severance from official connexion with the university is greatly regretted.

A course of lectures on the imagination in mathematics has been arranged, and will be delivered by Dr. W. H. Young.

LIVERPOOL SCHOOL FOR THE INDIGENT BLIND.

With the exception of that of Paris, the Liverpool School for the Indigent Blind is the oldest institution of its kind in the world, having been founded in 1791. Its utility and value are well maintained. In addition to the head quarters in Hardman Street, a valuable agency for the instruction of the afflicted children only is maintained in Wavertree. In the one hundred and twenty-first annual report presented to the annual meeting it was intimated that the committee desired to offer facilities for teaching adults who had lost their sight late in life. It would not be satisfactory for the older men to live under the routine and discipline of the school for the young, and a home had been established close by to accommodate twelve men, who could live there and attend school daily. This is an excellent enterprise and deserves support, as adults are shut out from most of the other institutions in the country. The announcement that Mr. Wade Deacan, who had held the presidency for thirteen years, had decided to resign the office was received with much regret. Mr. A. Isaacson was appointed his successor.

DENTAL STUDENTS' BALL.

The dental students held their annual ball at the Adelphi Hotel on January 26th. There was a good attendance, and the ball-room was attractively decorated. The masters of ceremonies were Messrs. W. R. Bennette, H. T. S. Channing, and R. C. Kershaw, who were ably supported by a staff of stewards. The guests were received by Professor and Mrs. Thelwall Thomas, a charming bouquet being presented to the hostess by Mrs. Kershaw. An excellent programme of dance music had been provided, and the evening was much enjoyed by all present.

BIRMINGHAM.

GENERAL HOSPITAL, BIRMINGHAM.

DR. JAMES WILLIAM RUSSELL was on January 26th elected Physician to the hospital for a term of fifteen years. Dr. Russell, who is the son of Dr. James Russell, Physician to the Hospital from 1859 to 1885, is a Cambridge graduate and a Fellow of the Royal College of Physicians of London; he became Resident Medical Officer to the hospital in 1891, and a year later was appointed Assistant Physician. He is also Assistant to the Chair of Medicine in the University of Birmingham.

MANCHESTER AND DISTRICT.

POST-GRADUATE DEMONSTRATIONS.

IN order to suit the convenience of practitioners it has been decided to alter the day on which medical demonstrations are given at the Manchester Royal Infirmary from Monday to Tuesday. The surgical demonstrations will be held as heretofore on Friday. The demonstrations will therefore be given at 4.30 p.m. every Tuesday and Friday throughout the year, the months of April, August and September, and Whitsun week excepted.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

SCOTTISH POOR LAW MEDICAL OFFICERS' ASSOCIATION.

Annual Meeting.

THE annual meeting of the Scottish Poor Law Medical Officers' Association was held in the St. Enoch Hotel, Glasgow, on January 26th, under the chairmanship of Dr. Gilbert Campbell, Chairman of the Committee.

Annual Report.

The committee reported that during the year 1911 detailed information was supplied to a large number of applicants in regard to various appointments. The information was in every case founded on facts supplied by the outgoing medical officers, and thus every applicant knew with accuracy the nature of the appointment.

One of the points upon which the committee was consulted during the year led to a communication being addressed to the Local Government Board inquiring whether a complete set of rules were in existence defining the duties of medical officers to parish councils. The reply of the Board was to the effect that the Board had in contemplation the issue of regulations relating *inter alia* to the duties of Poor Law medical officers. So far as the committee was aware, such rules had not yet been issued.

The Local Government Board had also informed the committee that a number of questions arising in connexion with the granting of medical relief to old age pensioners had not yet been dealt with by any general instructions to the Board. The committee had advised members that:

> Medical officers must attend pensioners as private patients, unless in cases where the parish council grants a medical relief order, then the medical officer must attend the case as part of his duties without any extra remuneration from his parish council. In regard to the supplying of medicine to pensioners, if the medical officer's salary is inclusive of medicine, then he must supply the medicine in the same way as to ordinary paupers. But, if his salary is exclusive of medicines, then he will charge the cost, and recover the same from his parish council.

In several cases in which the services of a medical officer had been terminated on the ground that he was not resident in the parish, the committee had pointed out that as the medical officer had no security of tenure, the parish council could dismiss him without cause given, provided that the length of notice was reasonable, depending on whether the salary were paid monthly or quarterly. In every case reported to the committee the medical officer had resided nearly ten miles from his parish, so that when another medical man started practice in the district it was in the interests of the public that the new man should hold the appointment. The annual meeting unanimously approved the view expressed by the committee.

The Insurance Act had led to many questions being addressed to the committee on which it had been unable to give any definite advice, as everything must depend on the terms, if any, which were arranged with the Insurance Commissioners—"Amount of remuneration, wage limit, mileage in country districts, supplying of drugs, etc., all being burning questions. Combination of the profession is at the present moment essential. Union means success; disunion means disaster."

The report expressed a wish for the success of the association formed to bring Poor Law officials, including inspectors, governors of poor-houses, medical officers, and clerks, under the scheme of superannuation.

The financial report showed that the position of the association in this respect was satisfactory, the balance in hand being £190.

It was pointed out that the secretary had during the last fifteen years carried out the duties of his office without fee or reward, and, having regard to the satisfactory condition of the association's finances, it was unanimously agreed that he should, as from 1911, receive an annual honorarium of ten guineas. The minutes of the last annual meeting were approved, the committee's report adopted, and the election of office-bearers for the ensuing year carried unanimously. The meeting terminated with the usual vote of thanks to the office-bearers.

The secretary of the association is Dr. W. L. Muir, 1, Seton Terrace, Glasgow, to whom, or to the treasurer, Dr. Matthew Martin, 737, Gallowgate, Glasgow, the annual subscription of 5s. should be sent.

HOME FOR FEEBLE MINDED CHILDREN.

The annual meeting of the Glasgow Association for the Care of Defective and Feeble-minded Children was held on January 22nd, Lord Provost Stevenson presiding. The report for the year stated that an extension of Waverley Park Home at Kirkintilloch was proposed, and an appeal for £3,000 would be issued. It was proposed to build cottages to accommodate forty girls, thus doubling the present accommodation. Dr. Hamilton Marr, H.M. Commissioner in Lunacy, said that the feeble-minded in Scotland were estimated at 2.33 per 1,000 of the population, which meant 11,000 feeble-minded persons. The Education of Children (Scotland) Act, 1906, enabled school authorities to make special provision for children who, not being imbecile and not being merely dull or backward, were by reason of mental defect incapable of receiving proper benefit from the instruction in ordinary schools, but from 16 years of age and upwards no special provision was made, and the Waverley Park Home was the only institution ministering to the wants of this class. As the result of many years' practical experience he had come to the conclusion that there was no such person as an ineducable child—that there was no child who, on account of mental defect only, could not be educated. Education might be impeded or rendered entirely useless through gross physical defects, such as paralysis, but in the absence of such physical defects all children could be taught cleanlier and better habits and to use their physical powers so well as to be able to do simple mechanical work in such a manner as to repay some part if not all of the expenditure on them.

PROPOSED OPEN-AIR SCHOOLS FOR GLASGOW.

At the annual social meeting of the Ladies' Auxiliary of Glasgow and District Branch of the National Association for the Prevention of Consumption, held in the City Chambers on January 22nd, an interesting statement was made by Bailie J. W. Stewart, the convener of the Health Committee of the Corporation. Although twenty years had elapsed since the late Dr. J. B. Russell, as medical officer for the city, reported on tuberculosis, there had been no definite policy until within the last few years. Now the disease was notifiable, dispensaries had been provided, a hospital would be erected on the outskirts of the city for advanced cases which were a source of public danger, and it was hoped to do some educative work and to classify the sanatorium cases. Conferences were about to be held with educational and other authorities to discuss the possibility of establishing country homes in connexion with which there might be open-air schools. In that way it was hoped to secure those children who were beginning to show less power of resistance and a predisposition to consumption, and, while allowing them to continue their education, to arrest the disease and send them out with increased power to resist consumption or any other disease.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

BICENTENARY OF TRINITY COLLEGE MEDICAL SCHOOL.

A LARGELY-ATTENDED meeting of graduates in medicine of the University of Dublin was held on January 22nd in the Anatomy Theatre of the Medical School, Trinity College, to consider what part they should take in the bicentenary festival of the Medical School, to be held in the first week of July next. Mr. Robert H. Woods, President of the Royal College of Surgeons, occupied the chair. An Executive Committee was formed, with power to add to its numbers, and Drs. W. G. Harvey, S. S. Pringle, and R. J. Rowlette were appointed Honorary Secretaries. The Chairman expressed the opinion that the graduates should arrange something permanent and useful to mark the bicentenary of the school. The provisional programme for the festival is as follows:

Thursday, July 4th.—Reception of guests and delegates in College Library at 3.30 p.m. In the evening there will be a dinner in the dining hall, followed by a performance in the examination hall by members of the University Amateur Dramatic Society.

Friday, July 5th.—A commemoration service in the College Chapel, followed by unveiling of memorial stone to Dr. Stearne by the Provost, and an address by the Rev. J. P. Mahaffy, followed at noon by the presentation of addresses by delegates. In the afternoon a garden party and in the evening the graduates' dinner.

Saturday, July 6th.—Visit to medical school, followed by reception at the Royal College of Physicians. Conferring of honorary degrees at 1 p.m. Afternoon, garden party.

BELFAST MEDICAL STUDENTS' ASSOCIATION.

The annual public meeting of the Belfast Medical Students' Association was held in the Students' Union on the evening of January 28th. The chair was occupied by the president of the association, Mr. W. W. Dalziel Thomson, B.A., M.B., who delivered an address upon the struggle for truth in medical science throughout the ages. How often in the history of the profession truths had struggled to the birth only to die or to lie dormant for centuries awaiting the fullness of time, or only to be accepted after the bitterest of bitter struggles. He instanced the fate of Andreas Vesalius, who died in the prime of life in penury and broken-hearted. Harvey waged and won the battle for truth, and dealt the death-blow to the doctrine of spirits and humours, which had influenced the conceptions of disease since the days of Hippocrates. The contempt which was cast upon Jenner's development of vaccination against small-pox was then referred to. The neglect, stupidity, malignity with which Semmelweis's discovery of the identity of puerperal fever and septicaemia brought this man of genius within the gates of a lunatic asylum. The contemptuous reception of the open air treatment of consumption of Dr. Henry MacCormac was the last instance.

Sir Thomas Myles (Dublin) then delivered an address on "The Medical Student as I Know Him." After some historic and literary references, Sir Thomas said that what struck him most was the general change in the type from Bob Sawyer to the present day, and, next, the passing of the "chronic." In his student days the "chronic" was a well-known and familiar institution, an encyclopaedic source of wonderful information to all first-year students. The medical student must always remain apart from the general mass of mankind. Death and suffering were always with him; what were tragedies to others were commonplaces to him. The Insurance Act, he believed, would tend to split medical men into two camps—those who examined their cases and those who did not. On the whole, he feared the standard would be lowered. He urged all to remember the duty they owed to their patients, and to treat the poorest with due courtesy—as they would treat a duke. In thirty years' practice he had seen thousands of poor patients facing suffering and death with uncomplaining fortitude, and amongst them all he had never met a coward.

Professor Lindsay complimented Dr. Thomson on his re-election as President, and welcomed Sir Thomas Myles, whose address contained much advice worthy of being retained.

On the motion of Mr. J. V. Holmes, seconded by Mr. E. P. Dewar, a hearty vote of thanks to Sir Thomas Myles was passed with acclamation.

RESEARCH DEFENCE SOCIETY.

On January 24th the annual general meeting of the members of the Dublin branch of the Research Defence Society was held in the theatre of the Royal Dublin Society. Sir Charles Ball, Bart., presided, and there was a large attendance. The report for the year was read; in it the committee said that the number of members was well maintained, being now over 500. The literature had

been freely distributed. An important development had been the formation of a ladies' committee, which had undertaken to arrange drawing-room meetings, and by every means in its power to inform other women of the truth about experiments on animals. The committee for the ensuing year was elected. A lecture was then delivered by Professor Leonard Hill, F.R.S., on "Submarine Diving made Safe and Possible through Experiments on Animals." After a cordial vote of thanks to the lecturer the proceedings terminated.

Irish Health Insurance Society.

At the last meeting of the Provisional Committee of the Irish Health Insurance Society it was stated that earlier in the week a meeting of hospital matrons and secretaries of nursing associations and nursing homes had been held, as a result of which it was suggested that a large public meeting of governors of hospitals, doctors, and others interested should be called. It was further suggested that a meeting of nurses should be held, also a series of small meetings or conferences in the various hospitals in the city. These various suggestions were agreed to.

Beri-beri at Queenstown.

A barque from Lobos to London with a cargo of guano was towed into Queenstown last week with one of the crew dead and six others in a very serious condition, as the result of beri-beri. The voyage was protracted, and one by one the crew were attacked by the disease. When off Kinsale one of the crew, who had been laid up for some weeks, died, and the captain put into Queenstown for medical aid and a fresh crew. The sick men were landed, and at once placed in hospital.

An Appeal from Cork.

An appeal is made on behalf of Miss Daly, who through the death of her brother, the late Dr. Pierce J. Daly, of Cork, is now left absolutely devoid of means. Her health, in consequence of long years of devoted nursing, has been greatly shattered. In order to enable her to avoid having to enter a public charitable institution, it has been decided to appeal to the generosity of his many friends in the hope that a liberal and substantial response may be made. A sum of £395 has already been raised, chiefly in Cork, and further subscriptions will be received by the Honorary Treasurer, Dr. M. Cagney, 6, South Mall, Cork; or by Dr. Philip G. Lee, Honorary Secretary, 26, St. Patrick's Hill, Cork.

Medical Inspection of School Children.

Last week, at a meeting of managers and teachers of primary schools, Mr. Oliver St. John Gogarty, F.R.C.S.I., delivered a lecture on "The Health of Our School Children." Ireland, he said, was the only civilized nation that had no such inspection at the present day. No statistics of diseases of school children being available for Ireland, he quoted those of England and Wales to show the number and variety of diseases and the importance of constant medical inspection. More money was wanted for the Irish schools; Scotland, with much the same population, was in receipt of exactly double the educational grant given to Ireland. Medical inspection would have two advantages—it would prevent epidemics, and the child would be taught according to its power of learning. Dr. McVittie, Professor Henley, Dr. Story, Sir Lambert Ormsby, and the Provost of Trinity College also spoke, urging the importance of medical inspection both of the children and the schools.

Infantile Mortality.

The annual report presented to the first annual meeting of the Dublin Committee for the Prevention of Infantile Mortality stated that the instruction given by the visitors was much appreciated by mothers, and the executive were confident that in a very short time infantile mortality would be considerably reduced in the city. The committee had only been in reality working for about six months, as the first band of trained workers, twenty in number, only started last June. There were now eighty trained workers. The principles adopted at the initiation of the scheme had been strictly adhered to: (1) The education of the poor regarding the rearing of children; (2) co-operation with existing medical, educational, and relief agencies; 800 cases had been sent to the secretary by the public health authorities, and 2,000 visits had been paid by the ladies from June 22nd, 1911, to January 6th, 1912. Mr. Vaughan (Chairman of the Public Health Committee) said that that committee was absolutely satisfied that the society was doing an excellent work, and would give it every possible support and assistance.

Correspondence.

RESEARCH DEFENCE SOCIETY.

SIR,—It is just four years since this society was founded, to make generally known the facts as to experiments on animals in this country, and the regulations under which they are conducted; the immense importance of such experiments to the welfare of mankind; and the great saving of human and animal life and health which is already due to them. We hope that you will kindly allow us to report progress. During the past year the society has gained 1,000 new members and associates, and has formed ten new branches. It now has 5,000 members and associates.

During the year the society has lost by death eight of its Vice-Presidents: Sir Henry Butlin, Canon Duckworth, Lady Foster, Dean Gregory, Sir Joseph Hooker, Dr. Hughlings Jackson, the Bishop of Oxford, and Sir Samuel Wilks. The following have consented to act as Vice-Presidents: H.H. the Aga Khan, Mr. Waldorf Astor, Mr. Otto Beit, Lord Cobham, Lord Dunedin, Lord Leconfield, Sir Henry Morris, the Bishop of Rangoon, the Bishop of St. Asaph, Mr. Paul Swain, and the Bishop of Truro.

The following pamphlets and leaflets have been published during the year; (1) A Question of Ethics; (2) Experiments during 1910; (3) The Facts of the Case; (4) The Saving of Human Lives; (5) The Rockefeller Institute; (6) The Case presented by Antivivisectionists; (7) Recent Surgical Progress; (8) Antivivisection Shops; (9) Tuberculosis; (10) Sleeping Sickness; (11) Annual Report, Balance Sheet, and List of Members and Associates. A book is in the press, giving a full summary of the evidence before the Royal Commission; it will be published within a few weeks after the publication of the final report of the Royal Commission.

Since January 1st, 1911, the number of addresses, lantern lectures, and debates has been about 120. The quantity of literature which has been distributed has far exceeded that of any preceding year. The society has held stalls at various important exhibitions.

We greatly hope that many of your readers will become members or associates of the society, and will help its useful work. The Honorary Secretary will always be glad to answer every inquiry, to send literature to all applicants, to receive names for membership or associateship, and to make all necessary arrangements for addresses and lantern lectures in London or elsewhere.—We are, etc.,

CROMER,
President.
SYDNEY HOLLAND,
Chairman of Committee.
F. M. SANDWITH,
Honorary Treasurer.
STEPHEN PAGET,
Honorary Secretary.

21, Ladbroke Square, London, W., Jan. 27th.

MEMORIAL TO DR. HUGHLINGS JACKSON.

SIR,—I desire to support Dr. Mercier's plea for the collection and publication of Dr. Hughlings Jackson's works. That would be a fitting memorial of a physician of the first rank. It would recall to some of us our recollections, and would explain to others the reasons for our admiration of one who was too careless of his record. For instance, I find on my shelves pamphlets published by him in the *Transactions of the St. Andrews Medical Graduates' Association* and in the *Ophthalmic Society's Transactions*, neither of which is particularly accessible. I think that if Dr. Mercier could be induced to issue a memorial volume it would have a great and lasting success; besides, Dr. Mercier might complete his tale of the cerebral surgeon

and his Scottish patient, who explained in due time that neither the physician nor the surgeon "had a joke to put in."—I am, etc.,

James Murray's Royal Asylum, Perth, Jan. 26th. A. R. URQUHART.

THE STUDY OF CONDUCT.

SIR,—On reading the letter of Dr. Mercier in last week's JOURNAL, I feel sure that he and we of the Education Committee of the Medico-Psychological Association were very much at cross-purposes on the occasion to which he refers. I, for one, by no means dissented from the study of conduct, but we did not assent to conduct being classed with mental attributes, such as reason, will, etc., in a formal syllabus of study then being drawn up. We may be doing an injustice to Dr. Mercier in attributing to him the idea that seemed to underlie his proposition; in that case I should be sorry. But I must point out to him that in that event we are but quits, seeing that he attributes to us an opinion which is not held by any of us, as far as I know. Each day, each hour in our work, we have perforce to give study to conduct whether we may think or not that study to be "not feasible or desirable" Without that study we should be all at sea in our endeavours to estimate the mental affection which begets and is evidenced by conduct.

It occurs to me that if either party continues in the belief attributed to him by the other, our patients will grumble at the injustice of their freedom being taken away, and he or we, as the case may be, continuing to be at large. But Dr. Mercier's subtle and genial humour will always protect him should danger threaten him in such a direction.—I am, etc.,

Ticehurst, Jan. 26th. H. HAYES NEWINGTON.

ARTIFICIAL RESPIRATION OF THE APPARENTLY DROWNED.

SIR,—I cannot follow Professor Leonard Hill's dictum in last week's issue "that the right heart can be emptied by gravity into the abdominal vessels by lifting up the head end and squeezing the thorax when there is over-distension of the right side of the heart in the apparently drowned." Neither can I understand him when he says: "This is an easy method of producing the effect of venesection." It may not be impossible to perform the operation of squeezing the thorax and compressing the engorged right heart, but what about the life of the patient and his ribs? Again, I should like to remark that the object of venesection is not only to relieve tension, but also to let out by-products of asphyxiation from whatever cause, just as auto-intoxication in the abdominal cavity leads to convulsion and is relieved or cured by Epsom salts. It is the extreme cases of suffocation, when diapedesis and intense venous engorgement has succeeded to complete deoxygenation, that I am anxiously concerned about. Nay, when the heart muscle is paralysed from over-exertion, and its substance saturated with CO_2, $CHCl_3$, or other noxious matter, squeezing its walls cannot surely simulate venesection. In the last stage of asphyxiation not only is the right auricle distended, but also the superior and inferior vena cava. In brief, the whole venous system is in a state of engorgement out of comparison with the blood remaining in the arterial system.

I take the liberty of referring Professor Leonard Hill to my series of communications on the practice of blood-letting in the *Clinical Journal* some few years back. He will there find the account of a case of submersion in which venesection saved the man's life when it was quite evident that artificial respiration was useless. Twenty ounces of blood were let out of the right arm; until venous blood was discharged respiration did not return, and then only by an involuntary death-gasp. This was subsequently imitated by the Howard method to the entire satisfaction of a large crowd of people. And, although the patient lost 20 oz. of blood, no saline fluid was injected into a vein or into the rectum. Diapedesis had occurred in the three cavities of the body. He was dazed for many days, and the ophthalmoscope revealed extensive retinal haemorrhages in both eyes, and he was absolutely blind. He also had chest disturbance and his stools were black. His skin, too, showed many petechial haemorrhages. In a darkened room, with liberal quantities of warm milk and the use of diuretics and purgatives, he made a complete recovery. I would add that extensive friction, shampooing, was resorted to from the first moment I saw him. Also I was able to keep up warmth by hot bottles from the ship alongside the pier adjoining the water from where he was removed. The moral of this case is that Nature attempted diapedesis and I completed it by one of the most useful yet often abused operations—venesection.—I am, etc.,

Alton, Hants, Jan. 27th. JOHN FREDK. BRISCOE.

SOME TOXIC EFFECTS OF SALVARSAN.

SIR,—As all of us require an unbiassed opinion upon salvarsan, it would have been better to have given a summary of the whole of the Fifth German Congress of Neurologists held last October in Frankfurt, as then we could have heard both sides. Hearing only one side leaves this side widely open to criticism. In this country more than in any other we have heard so much as to what the "great" or "well-known" syphilologists think of salvarsan. Notice that their greatness has increased since the advent of the drug, although as often as not they have never given an injection. Why an able clinician or a reader of many books should be able to judge a subject of which his experience is *nil* must be an enigma for many. As a clinician Professor Finger is probably second to none, but his knowledge concerning salvarsan and Wassermann's reaction, which is destined to play so important a part in regulating the treatment, is shared—nay, superseded—by many others whose opinion is never voiced. We in this country must not forget that a foreign professor is dependent upon his assistants for the knowledge of any new thing, and assistants can be both good and mediocre.

We read that Professor Finger does not agree with Wechselmann's opinion that the reaction following the injection is due to impurities in the distilled water, because the pharmacist says it is always freshly prepared. The pharmacists in London say also the same thing. This being the case, why is it that none of the reactionary symptoms appear if the distilled water is redistilled a few hours before the injection? and why is it that the symptoms which have been put down as due to the salvarsan can be produced in animals by the use of distilled water alone—distilled forty-eight hours or more before use? That the former statement is correct can be proved by every one who will take the trouble to redistil his water a few hours before giving the injection. Unfortunately scepticism thwarts the attempt.

Another point referred to is the frequency of nerve lesions following salvarsan. Why is it that lesions of the cranial nerves have been more common in Professor Finger's clinic than other clinics on the Continent? Because the injection has not been repeated or mercury added until a recurrence followed the first.

Has it ever been the custom to treat symptoms only? Certainly not. Then why should salvarsan be blamed for producing lesions which would never have occurred if the injections had been repeated or combined with mercury? It is owing to following this rule that no other clinics have experienced these nerve lesions, which are really syphilitic recurrences.

Concerning the French critics, I need only remind readers of the three cases of optic atrophy which were reported before salvarsan was used in France. That was nearly two years ago; yet, oddly enough, such cases have not increased in number—in fact, optic atrophy is never mentioned now. So long as good reports emanate from trustworthy observers, it is our duty to find wherein the fault lies when adverse reports emanate from equally trustworthy observers. It does not aid the cause of medicine when sceptics handle a subject of which they have had no practical experience.—I am, etc.,

London, W., Jan. 29th. J. E. R. MCDONAGH.

MOSQUITO DESTRUCTION.

SIR,—In your issue of January 13th there appears a letter from Dr. Elkington of Brisbane, in which he states that he has tried potassium cyanide for the purpose of killing mosquito larvae, as recommended by us in the BRITISH MEDICAL JOURNAL of September, 1911. I should like to point out a mistake, through which it appears that we found 1 part of cyanide in 3,000,000 an

efficient larvicide. This was not the case, as the highest dilution we employed was 1 in 300,000 of water.

I note, however, that Dr. Elkington found that cyanide solutions as strong as 1 in 15,000 failed to kill larvae. This is quite at variance with our results, as the following figures show. In our experiments 1 part of potassium cyanide in 26,000 parts of water killed all the larvae (*Culex pipiens*) in less than two hours; 1 part cyanide in 58,000 of water killed all the larvae in three and one-third hours; 1 part cyanide in 303,000 of water killed about 50 per cent. of the larvae in six and a half hours, and all except one (out of about 50 larvae) in twenty-two hours. These results are sufficient to show how successful a larvicide potassium cyanide proved under laboratory conditions, and it is difficult to see what the disturbing factor can have been in the experiments conducted by Dr. Elkington.—I am, etc.,

Liverpool, Jan. 26th E. S. EDIE.

THE SOLUTION AND DECOMPOSITION OF ACETYL-SALICYLIC ACID.

SIR,—Dr. Graham Chambers, writing on this subject, criticizes[1] Dr. Wynn Westcott and myself for stating in the *Extra Pharmacopoeia* that acetyl-salicylic acid passes unchanged through the stomach, decomposing when it reaches the intestine, his view being that the substance is absorbed as such without decomposition. His experiments *in vitro* indicate that very little of the acid splits up in half an hour, either in acid or alkaline juices, and in his conclusion he advocates the administration of acetyl-salicylic acid "in solution," so as to reduce the decomposition to a minimum—that is, he claims that so given it passes rapidly into the intestine (pharmacological action being frequently seen in half an hour) and is absorbed for the most part unchanged. It therefore appears that the statement in our work to the effect that it passes unchanged through the stomach (whether given in cachet or solution would probably make little real difference) may certainly stand, even according to Dr. Chambers's view—the exact pharmacological action is not stated, though perhaps it is implied.

With regard to the action on reaching the alkaline intestinal juices, there must surely be a splitting up of the acetyl-salicylic acid, and the formation of sodium salicylate, however slight at this stage, either from the nascent salicylic acid previously formed in passing through the stomach—admitted by Dr. Graham Chambers—or by the splitting up of the acetylated acid by action of the alkali. Dr. Graham Chambers admits, also, that at body temperature there is "little" of the acetylated acid decomposed at the end of half an hour both in acid and in alkali *in vitro*, but, of course, it is difficult to say exactly what occurs *in vivo* by reviewing experiments *in vitro*.

I would point out that the prescribing of acetyl-salicylic acid in simple aqueous solution is hardly satisfactory. A dozen 10-grain doses in this form would necessitate the dispensing of them in a 120 oz. Winchester! At the same time a very sightly mixture can be made by suspending 10 grains of the powdered acid in ½ oz. of water, with the aid of 90 minims of tragacanth mucilage—that is, 12 doses in a 6 oz. bottle. Sooner or later, however, in presence of water, acetyl-salicylic acid splits up, and therefore the use of an aqueous, let alone an alkaline medium, especially in hot weather, cannot be strictly correct; 10 grains of the drug in powder form would require about 10 oz. of stomach juice to dissolve it, and the result—passage rapidly to the intestines—as Dr. Chambers holds, would be practically the same thing as if the drug were in solution.

With regard to the details of experiments, it so happens that by a curious coincidence I conducted a number of experiments last year with aceto-salicylic acid, both in aqueous solution and in solution with added HCl in the correct proportion, and arrived at conclusions almost identical with those of Dr. Graham Chambers, so far as *in vitro* is concerned. For example, I found by colorimetric analysis that 5 per cent. of a total weight of aceto-salicylic acid in saturated solution in presence of 0.2 per cent. HCl was hydrolized in an hour. Seeing that pharmacological activity is evident in less than this time, it may be that just this small amount of liberated nascent salicylic acid passing on to the alkaline intestinal juice produces or commences the pharmacological action, and we may have here an explanation of the comparatively potent action of a dose of salicylic acid in comparison with the mild effect of this slowly produced nascent acid. Dr. Chambers and I are at one in agreeing that the decomposition of acetyl-salicylic acid in the presence of 0.2 per cent. HCl is a gradual process. I might add that so long ago as 1903 (*Schweiz. Woch. f. Chem. u. Pharm.*, 1903, p. 116) doubt was expressed whether the therapeutic activity of acetyl-salicylic acid was due to it passing unchanged into the intestines, and experiments are cited showing the hydrolysis of aceto-salicylic acid in presence of artificial gastric juice. It was there questioned whether a dose of a salicylate would not produce a therapeutic effect equal to the acetylated acid.—I am, etc.,

London, W., Jan. 22nd. W. HARRISON MARTINDALE.

[1] BRITISH MEDICAL JOURNAL, January 20th, p. 121.

NOTIFIABLE TUBERCULOSIS IN CHILDREN AND VON PIRQUET'S TEST.

SIR,—I quite agree with Dr. Esther Carling that some definite standard should be fixed upon which a reliable diagnosis of tuberculosis in children may be based. In my opinion we have in von Pirquet's test an extremely reliable diagnostic agent, provided certain conditions are fulfilled—namely: First, that in every case in which the first test is negative, before giving a negative opinion the inoculation should be repeated, preferably with a drop of undiluted old tuberculin instead of the 25 per cent. solution generally used. This repetition I believe to be absolutely necessary to avoid errors. Secondly, that forty-eight hours should be the maximum time limit for the appearance of the reaction, instead of the twenty-four hours often recommended. I have found the reaction delayed for forty-eight hours in several cases which subsequently proved to be tuberculous.

Under the above conditions I have performed 150 tests. In cases where tubercle bacilli were present in the sputum, or where the physical signs were unmistakable, I obtained a positive reaction in 96 per cent. In cases where the diagnosis was doubtful (no bacilli, no physical signs), I found the reaction positive in only 33 per cent. of cases, and in many of these the diagnosis was confirmed by subsequent observations. Of the 150 cases, only 16 were children, but I obtained a positive reaction in each one where the physical signs were definite or where bacilli were present. Five doubtful cases in children gave no reaction, prolonged observation of these latter not revealing any signs of tuberculosis. It must not be forgotten that in some cases a palpable infiltration can be detected where there is little or no reddening of the skin, and that such cases are to be regarded as positive reactions. I am at present performing the test with a circular perforator, and measuring the areola at the end of twenty-four and forty-eight hours.—I am, etc.,

G. D. H. WALLACE, M.R.C.S., L.R.C.P., D.P.H.,
Medical Superintendent, Westmorland Sanatorium.

January 29th.

SIR JAMES BARR AND THE INSURANCE ACT.

SIR,—It has given me so much pleasure to find that some medical men have raised a protest against various points in Sir James Barr's letters on the Insurance Act, that I feel it almost a duty to join them. There are some 40,000 medical men on the *Register* of the United Kingdom, and it would be a miracle if they all thought alike politically, or all saw eye to eye on the Insurance Act. There are some of us who think that a socialist, far from being "an individual who barely sees beyond the length of his nose," is in reality a person who takes a wider and more extended outlook on the economic conditions of Western civilization than do persons of other political creeds. Anyhow, it is not very dignified for Sir James Barr to cast cheap jibes at those politically in disagreement with him. There are men both within and without the ranks of the profession, probably quite his equals in intelligence, who profess themselves socialists, and it ill becomes him to compare them to "general paralytics with grandiose ideas."

If Sir James Barr will refer to a resolution passed by socialist doctors, published in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL, January 27th, p. 91, he will see

that their ambition to prevent and eradicate disease and their desire for the wellbeing of the nation are as great as his own. It is only in methods that a difference appears, and time alone can decide whether his or ours are right. He seems to connect in his mind socialism with "that spirit of dependency which is ever found in degenerate races." But dependency is the result, and not the cause, of degeneracy, and degeneracy is the direct result of bad social conditions. Socialism aims at abolishing bad conditions, preventing degeneration, and rendering true individualism and *in*dependency possible for all. Spoon-feeding by a paternal Government may be wise as a temporary measure for checking degeneracy, but it is no part of socialism.

Sir James Barr supports the contributory system of the Act as its one redeeming feature, and apparently condemns socialists for not doing so. But, may I ask him, what is the good of causing ill health in order to cure it? Deductions of even 4d. a week from a family income of 16s. or 17s. a week must cause increased shortage of food, of clothes, and of house room, and so contribute to ill health, dependency, and degeneracy. If the medical profession had raised their voices against compulsory contributions from poor families earning less than, say, 25s. a week, as heartily as they raised it for a wage limit of £2 a week for medical benefits, I cannot help thinking they would have gained more respect.

Once more, though Sir James Barr praises altruism and its ennobling effects, yet in the last sentence of his second letter he makes an appeal direct to selfishness when he raises the fear of increased income tax. Surely it is more truly altruistic to pay cheerfully in rates and taxes whatever may be required for the community's good than to appear in hundreds of "Lists of Subscribers." Organized altruism on the part of all, is infinitely more efficacious than doles to charitable institutions. The man who grudges a tax for old age pensions or a rate for the public health service can have no charity, which is love, in his heart, though he give mightily to hospitals and figures in the newspapers.

In conclusion, I would ask the President-elect to refrain from speaking unkindly of his opponents and to credit them with sincerity, even as, I am sure, they are more than willing to credit him.—I am, etc.,

London, W., Jan. 29th. CHARLES A. PARKER.

SIR,—In reply to Dr. J. S. Manson's letter in the JOURNAL of January 27th, criticizing the statement I made in my letter of January 20th, "that this country has followed Germany in the path of degeneracy," I will accept his quotations from Dr. Arthur Shadwell's book on *Industrial Efficiency* as true—though, certain people who know the cities of Germany now, as compared with what they were ten or fifteen years ago, believe that slums in certain cities are on the increase. I am not in a position, however, to corroborate or refute these statements; but accepting Dr Shadwell's testimony, I should like to point out that it is a dangerous thing to diagnose any disease from one symptom, and the person who attempted to do so would be more than courageous. The fact that "the general wellbeing of the working classes in Germany, which is strikingly visible," etc., does not necessarily prove that Germany is not degenerating. I think that it is apparent that the general wellbeing of the working classes in this country is greatly improved as compared with ten or fifteen years ago, judging from the improvement in dress, the large increase of certain classes of amusement which are kept up largely by the working classes, the amount of money spent weekly on athletic sports, etc., but I should be chary in stating that we, as a nation, are not degenerating.

The National Insurance Bill will lower the prestige of our profession, and through time the *morale* of its members. The subject is such a large one, that to discuss it at any length would trespass too much on your space; but I should like to point out to Dr. Manson that devolution, as evolution, is a slow and subtle process, and that a quarter of a century is but a short epoch in the rise and fall of a nation, and, further, that it is necessary to consider, not merely the working classes, but all classes, in the discussion of such a momentous problem.—I am, etc.,

Edinburgh, Jan. 27th. FREDERICK PORTER.

Universities and Colleges.

UNIVERSITY OF LONDON.

ROYAL FREE HOSPITAL.

THE Earl of Sandwich presided at the recent meeting of the Committee of Management of the Royal Free Hospital, at which the following resolutions were passed:

That the Committee of Management desire to offer their cordial congratulations to Miss Eleanor Davies-Colley, M.D., B.S.Lond., upon her admission to the Fellowship of the Royal College of Surgeons of England; Miss Davies-Colley being the first lady to attain this position, the committee appreciate the distinction gained by the medical school of the Royal Free Hospital through her achievement.

The committee also desire to endorse the congratulations which the board rendered in 1909 to Mrs. Haslam (*née* Miss I. Woodward), M.D.Lond., who, after receiving a medical education at the London School of Medicine for Women and the Royal Free Hospital, was admitted to Membership of the Royal College of Physicians of London, being the first lady to receive this diploma.

It was also reported that the Cordwainers Company will present a gold medal to the nurse who shall obtain the highest number of marks at the annual examination.

UNIVERSITY OF GLASGOW.

ADDITIONAL EXAMINERS.

THE Glasgow University Court has appointed the following additional Examiners:

Zoology,—Professor E. A. Minchin, M.A., F.R.S., University of London.

Anatomy. — Professor Johnson Symington, M.D., F.R.S., Queen's University, Belfast.

Midwifery.—Robert Jardine, M.D., Glasgow.

Medical Jurisprudence and Public Health.—Jas. R. Kaye, M.B., D.P.H., Public Health Department, Wakefield.

Public Health Laboratory Work.—David Somerville, B.A., M.D., D.P.H., King's College, London.

Vital Statistics, etc.—Jas. R. Kaye, M.B., D.P.H., Wakefield.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on Thursday, January 25th, Sir Thomas Barlow, Bart., K.C.V.O., President, being in the chair.

The Death of Sir Henry Butlin.

The President referred to the great loss the profession had sustained by the death of Sir Henry Butlin, lately President of the Royal College of Surgeons of England; and it was resolved that a letter of sympathy should be sent from the College to Lady Butlin.

Admission of Members.

The following gentlemen having passed the required examination were admitted Members of the College:

Charles Hubert Bond, M.D.Edin.; Alfred Joseph Clark, M.B.Camb., L.R.C.P.; Georg Dorner, M.D Koenigsberg, L.R.C.P.; William Johnson, M.D.Lond., L.R.C.P.; Indarjit Singh, M.B.Camb., I.M.S.; Charles Wilfred Vining, M.D.Lond.

Licences.

Licences to practise were granted to ninety-two gentlemen who had passed the necessary examinations.

Diplomas in Public Health.

Diplomas in Public Health were granted, jointly with the Royal College of Surgeons of England, to the following gentlemen:

A. G. Atkinson, M.B., B.C Camb., L.R.C.P., M.R.C.S.; R. V. Clayton, M.B., B.S.Durh.; F. G. H. Cooke, L.R.C.P., M.R.C.S., L.S.A.; M. M. Cowasjee, L.R.C.P., M.R.C.S.; F. E. Cox, M.B., B.S.Melb., L.R.C.P., M.R.C.S.; G. H. Dupont, M.D., Ch.M.Edin.; *Josephine L. D. Fairfield, M.D., Ch.B.Edin.; W. M. Fairlie, M.B., Ch.B. Glasg.; W. R. Gibson, L.R.C.P., F.R.C.S.; J. A. Hagerty, M.B., Ch.B.Glasg.; G. C. Jackson, M.B., B.C.Camb., L.S.A.; S. Maitra, L.M.S.Calcutta; M. N. Mitra, L.M.S.Punjab; J. G. Owen, L.R.C.P., M.R.C.S.; H. C. E. Quin, L.R.C.P. and S.Edin., L.F.P. and S.Glasg.; *Jessie A. Scott, M.B., B.Ch.Edin.; F. M. Turner, M.D., B.C.Camb.; A. C. Watkin, L.R.C.P., M.R.C.S.

* Under the Medical Act, 1876.

Diploma in Tropical Medicine.

A diploma in Tropical Medicine was granted, jointly with the Royal College of Surgeons of England, to:

J. Bruce-Bays, M.D.Lond., M.R.C.S.

Lecturers.

The President announced that he had nominated Sir James R. Goodhart to be the Harveian Orator for this year, and Dr. D. B. Lees to be the Bradshaw Lecturer, and that the Council had appointed Captain R. McCarrison, I.M.S., to be the Milroy Lecturer for 1913.

Representatives of the College.

The President announced that he had nominated Dr. Frederick T. Roberts to be the representative of the College on the governing body of the University of Wales. Sir Francis Champneys was re-elected a representative on the Central Midwives Board; Sir Dyce Duckworth was re-elected a representative on the governing body of the University of Liverpool, and

Dr. Samuel West was appointed a representative of the college on the Court of Governors of the University of Birmingham.

Election of Councillors.

Dr. W. Collier, Dr. F. A. Mott, Dr. H. P. Hawkins, and Dr. H. D. Rolleston were elected councillors.

Reports.

A report was received and adopted from the Committee of Management, dated December 5th, 1911. The committee recommended that the following institutions should be added to the list of institutions recognized by the Examining Board in England for instruction in chemistry and physics: Royal Dental Hospital of London, and Mill Hill School. The committee also recommended that Rhodes University College, Grahamstown, South Africa, should be added to the list of institutions recognized by the board for instruction in chemistry, physics, and biology.

Certain addenda were made to the scheme of the new examination in psychological medicine, the chief of which were to the effect that the appointment of examiners should be made by the Censors' Board.

Communications.

The following communications were received: (1) From the Secretary of the Royal College of Surgeons of England reporting proceedings of the Council of that College on November 9th, December 14th, and January 11th last. (2) From C. I. Jackson, Esq., informing the College that the late Dr. Hughlings Jackson bequeathed a portrait of himself to the College. (3) From Frank Glover, Esq., offering to the College a gold pencil-case formerly the property of Sir Henry Halford, Bart., President of the College. (4) From Ernest M. Wilks, Esq., informing the College that the late Sir Samuel Wilks, Bart., bequeathed to the College a portrait of himself and a gold cup. The above gifts were accepted, and the thanks of the College ordered to be returned to the writers of the letters. (5) From the Doctors' Wives Defence Movement, concerning certain effects of the Insurance Act. (6) From Dr. James Kerr Love, on behalf of the National Bureau for Promoting the Welfare of the Deaf, concerning the delivery of proposed lectures. The matter was referred to the Censors' Board.

The Insurance Bill.

A Committee of the College was formed to watch the interests of the Fellows, Members, and Licentiates of the College under the provisions of the Insurance Act, with power to confer with any other body established for similar purposes should the Committee see fit to do so.

The President adjourned the Comitia until Tuesday, January 30th.

ADJOURNED COMITIA.

The adjourned Comitia was held on Tuesday, January 30th, Sir Thomas Barlow, Bart., K.C.V.O., President, being in the chair.

Reports.

A report was received from the Censors' Board concerning academic dress for Licentiates. The Board reported: "That a search of the annals having been made, the Board are unable to find that a distinctive dress has ever been granted to Licentiates." A report was received from the Representative of the College on the General Medical Council on the proceedings of the Council during its session in November last.

The Insurance Act.

After some formal business had been transacted the College proceeded to discuss a letter which had been received from the National Health Insurance Commission. The letter, which had been read to the College at its meeting on January 25th, was as follows:

National Health Insurance Commission,
Whitehall, London, S.W.,
24th January, 1912.

Sir,

The National Health Insurance Commissioners have decided, for their assistance in bringing the Insurance Act into operation, to take the earliest opportunity of personally conferring with representatives, widely selected, of the chief sections of the community specially concerned. Conferences with representatives of prospective insured persons have already taken place, and it is considered that the time has now arrived when it would be of material assistance to the Commissioners to obtain, in a conference, suggestions from representatives of the medical profession on certain important questions of procedure preliminary to bringing the Act into operation.

The National Health Insurance Joint Committee and the Insurance Commissioners for England, Scotland, and Wales respectively propose accordingly to hold a conference on Friday, February 2nd, with representatives of the medical profession, and the Royal College of Physicians in London is invited to appoint two members to attend the conference, which will be held at 3 p.m. A further communication will be addressed to you as to the place of meeting. A similar invitation is being addressed to the General Medical Council, the British Medical Association, and to other medical bodies.

The point which it is specially desired to discuss relates to the selection of the medical members of the Advisory Committee, by whom the Commissioners must be advised in the framing of regulations in accordance with Section 58 of the Act; and the Commissioners will also be glad to hear the views of those present on other matters of procedure in bringing the Act into operation which the medical bodies may desire to bring forward.

I am, Sir,
Your obedient servant,
R. W. HARRIS,
Assistant Secretary of the Joint Committee.

The Secretary,
Royal College of Physicians in London.

NOTE.—Section 58 of the Act is as follows: 'The Insurance Commissioners shall, as soon as may be after the passing of this Act, appoint an Advisory Committee for the purpose of giving the Insurance Commissioners advice and assistance in connexion with the making and altering of regulations under this part of this Act, consisting of representatives of associations of employers and approved societies, of duly qualified medical practitioners who have personal experience of general practice, and of such other persons as the Commissioners may appoint, of whom two at least shall be women."

The following resolution was proposed and seconded:

That in view of the letter from the Insurance Commissioners the College should proceed to appoint Representatives to place before the Commissioners the resolutions of the College respecting the Insurance Bill, in so far as these resolutions may not have been incorporated in the Insurance Act.

To this an amendment was proposed and seconded as follows:

That in view of the letter from the Insurance Commissioners the College should proceed to consider the invitation of the National Insurance Commissioners to confer with them on the methods of putting the Act into operation.

This was carried by a large majority; it thus became the substantive resolution, and as such was carried.

The following series of suggestions were then put and approved of:

1. That the Insurance Act, as it stands, or even after any modification in it which the Act empowers the Insurance Commissioners to make, is not adapted to secure the benefits "of insurance against loss of health and the prevention and cure of sickness" which are its stated purpose to provide, and that the co-operation of the medical profession in carrying out the operations of the Act is not possible under the Act or under any modifications of it empowered to the Commissioners without inflicting grave injury on the profession. There are:

2. The College, while desirous of doing all in its power to promote the objects of the Act in reference to the health of the community, is not prepared to accept the invitation of the National Health Insurance Commissioners to the conference on February 2nd for the purposes therein stated of "selection of medical members of the Advisory Committee" and for other matters of procedure in bringing the Act into operation.

3. That the College would be happy to assist in any steps which may be taken to prepare an amending Act for the improvement of the public health provided that the interests of medical practitioners and medical science be safeguarded.

The following motion was then proposed and seconded:

That the President be requested, with the assistance of such Fellows as he may nominate, to draw up and send a reply to the invitation of the Joint Commissioners in accordance with, and giving the substance of, the resolutions.

To this an amendment was proposed and seconded as follows:

That the College accept the invitation to discuss the election of medical members of the Advisory Committee, but is not at present in a position to discuss with the Commissioners any other matters of procedure in bringing the Act into operation.

This amendment was lost by a large majority, and the original motion being put was carried.

The President then dissolved the Comitia.

CONJOINT BOARD IN SCOTLAND.

THE following candidates passed at the quarterly examinations, held in Edinburgh, concluded on January 22nd:

FIRST EXAMINATION.—Anna Grace Stott, J. W. Robb, O. C. Macdonald, H. Morley, J. L. Hendry, J. P. Fairley, A. D. Gorman, and J. B. Minford; and 9 passed in Physics, 3 in Biology, and 3 in Chemistry.

SECOND EXAMINATION.—J. Martin, J. B. Aickin, H. A. L. Guthrie, W. MacLeod, J. Berry, A. F. Readdie, T. E. Lawson, W. S. O'Loughlin. One passed in Anatomy and 6 in Physiology.

THIRD EXAMINATION.—R. Kaushosh, B. S. Raj, Maud Bennett, W. Bannatyne, P. C. Ray, L. Lazarus, O. W. Bateman, A. G. Cowper, C. Cosgrove, D. Bharadwaja, V. J. A. Wilson, C. L. Patch, H. S. Dastur, R. Dorset, J. Williamson. Three passed in Pathology and 6 in Materia Medica.

FINAL EXAMINATION.—E. L. Matthew, T. M. Crawford, S. E. Mangenie, G. I. Secluna, A. L. Edwards, R. N. Raja, C. S. Owen, V. E. Field, H. W. Dunnet, C. C. Bose, A. M. Billings, H. S. W. Roberts, R. C. Mitter, H. G. Lamberty, W. J. H. Davis. Ten candidates passed in Medicine, 7 in Surgery, 13 in Midwifery, and 13 in Medical Jurisprudence.

CONJOINT EXAMINATIONS IN IRELAND.

Sessional Examinations, January, 1912.

THE following candidates have passed these examinations:

First Professional Examination.—W. K. Carew, D. J. Crowly, A. de C. Dodd, D. L. Kelly, D. Long, J. H. McKenna, P. O'B. Nolan.

Second Professional Examination.—J. F. Lyons, C. Murray.

Third Professional Examination.—J. D. Cherry, J. Crowly, T. Gray, R. J. Hennessy, E. Harnett, F. J. L. Kennedy, M. P. Leonard, M. P. Lee, L. McKeever, D. Mullin, J. Sandys, B. Sieff.

Final Examination, January, 1912.

The following candidates have passed this examination:

T. Buckley, H. E. Clarke, T. Dowzer, J. Geraty, B. Kelly, C. J. Kelly, W. O'Brien, P. H. McDonough, P. McGrath, C. P. V. McCormack, P. Ross-Todd.

Obituary.

SIR HENRY TRENTHAM BUTLIN, BART.,

D.C.L.DURH., LL.D.BIRMINGHAM, F.R.C.S.ENG.,

CONSULTING SURGEON TO ST. BARTHOLOMEW'S HOSPITAL; PAST PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION AND OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THIS great surgeon and pathologist, at once one of the most beloved and most distinguished members of our profession, passed away on Wednesday, January 24th, after a long illness, against which he struggled with extraordinary courage and energy.

Henry Trentham Butlin was born at Camborne, in Cornwall, in 1845, the residence of his father, the late Rev. W. W. Butlin. He received his education from a private tutor, and was entered as a student of the Medical School of St. Bartholomew's Hospital in October, 1864. He then took rooms in the college, of which the late Dr. Andrew was at the time Warden. Intelligent and industrious from the first, he nevertheless did not contend for the school prizes and scholarships. He received the diploma of Member of the College of Surgeons in 1868. It was at this date, after qualification, that he took to constant study in the wards and museum and played an active part in the discussions at the Abernethian Society. It happened that Mr. W. Square, of Plymouth, resigned the appointment of House-Surgeon to Sir James (then Mr.) Paget, after half a year's tenure, and Butlin was made House-Surgeon for the remainder of the year, from April to October, 1868. He afterwards went down to the country, but did not find private general practice quite to his taste. Returning to town, he took the Fellowship of the College in 1871, having already been elected in January of that year, Medical (*not* Surgical) Registrar to the Hospital for Sick Children, Great Ormond Street. The other candidate, now Sir Malcolm Morris, was also destined to rise high in the profession. Butlin greatly distinguished himself, as the records of the Medical Committee bear witness, by the way in which he carried out his duties during the eighteen months of his registrarship. He resigned in July, 1872.

He was elected Surgical Registrar to St. Bartholomew's Hospital in December of the same year, and from that date he remained attached to the great city hospital to the end of his days. The Registrarship was then a relatively new appointment, the value of which was not always understood by those who held it. More than one able man, afterwards distinguished, failed to avail himself fully of its advantages. The purely mechanical duties which it entailed appeared irksome and all but profitless, and the office of Demonstrator of Anatomy was then held to be a more certain pathway to a staff appointment. Butlin, on the other hand, comprehended from the first the responsibilities and duties of the registrarship, and knew how to advance medical science and his own legitimate interests by intelligent labour beyond purely secretarial and statistical work. He recognized what a wide field for research lay open to him. He studied pathology, for which he became so celebrated, and he grew famous because he was fitted for all the work which its study must entail. He noted and compared every feature of importance in every case which he registered. His grasp of microscopic art and science equalled that of Lionel Beale, whilst he had far more foresight than that physician about applications and conclusions. He perfected himself in the art of hardening, cutting, staining, mounting, and drawing morbid tissues, and, ever judicious in all things, he took care to study normal structures, so as to avoid mistaking normal conditions for disease. An error of this kind was very common in those days, when students were not so well trained in histology as they are now. Whilst never in a hurry, Butlin avoided the opposite extreme, and brought all the good work which he undertook before the relatively competent tribunals of the medical press and the learned societies, lest it should fall into irreclaimable oblivion. He never overlooked, as many are apt to do, the great truth that lost clinical records, like lost history, can never be rewritten.

As early as 1873 he prepared an account of the principal tumours removed in the course of that year at his hospital, which appeared in its annual *Reports*. He had already in 1872 been elected a member of the Pathological Society of London. He practised speaking and debating with great care, and speedily distinguished himself in discussions at the Society's meetings. As one consequence the council placed him, within three years of his election, on the Morbid Growths Committee, and he was Honorary Secretary from 1884 to 1886. A faithful study of living languages enabled Butlin to read European works, and ultimately to speak French, German, and Italian with fluency. He was thus enabled to co-operate with the most eminent Continental authorities.

He was made Assistant Surgeon to the West London Hospital in 1872, and remained on the staff of that institution for eight years. Whilst he was engaged in building up his reputation as a pathologist he held other appointments, besides the Registrarship, at Bartholomew's. In 1879 he was made Demonstrator of Practical Surgery at his School, and resigned the office of Registrar. From 1880 to 1892 Butlin, succeeding Sir Lauder Brunton, undertook the Out-patient Throat Department. In July, 1880, the Governors of St. Bartholomew's elected him Assistant Surgeon to the Hospital. Twelve years later, on the retirement of Mr. Morrant Baker in June, 1892, Butlin became full Surgeon. In 1896 he was elected Joint Lecturer on Surgery. He resigned the office of Surgeon in November, 1902, and was appointed Honorary Consulting Surgeon, and elected a Governor of the Hospital. He was placed on the Visiting Governors' Committee in 1909.

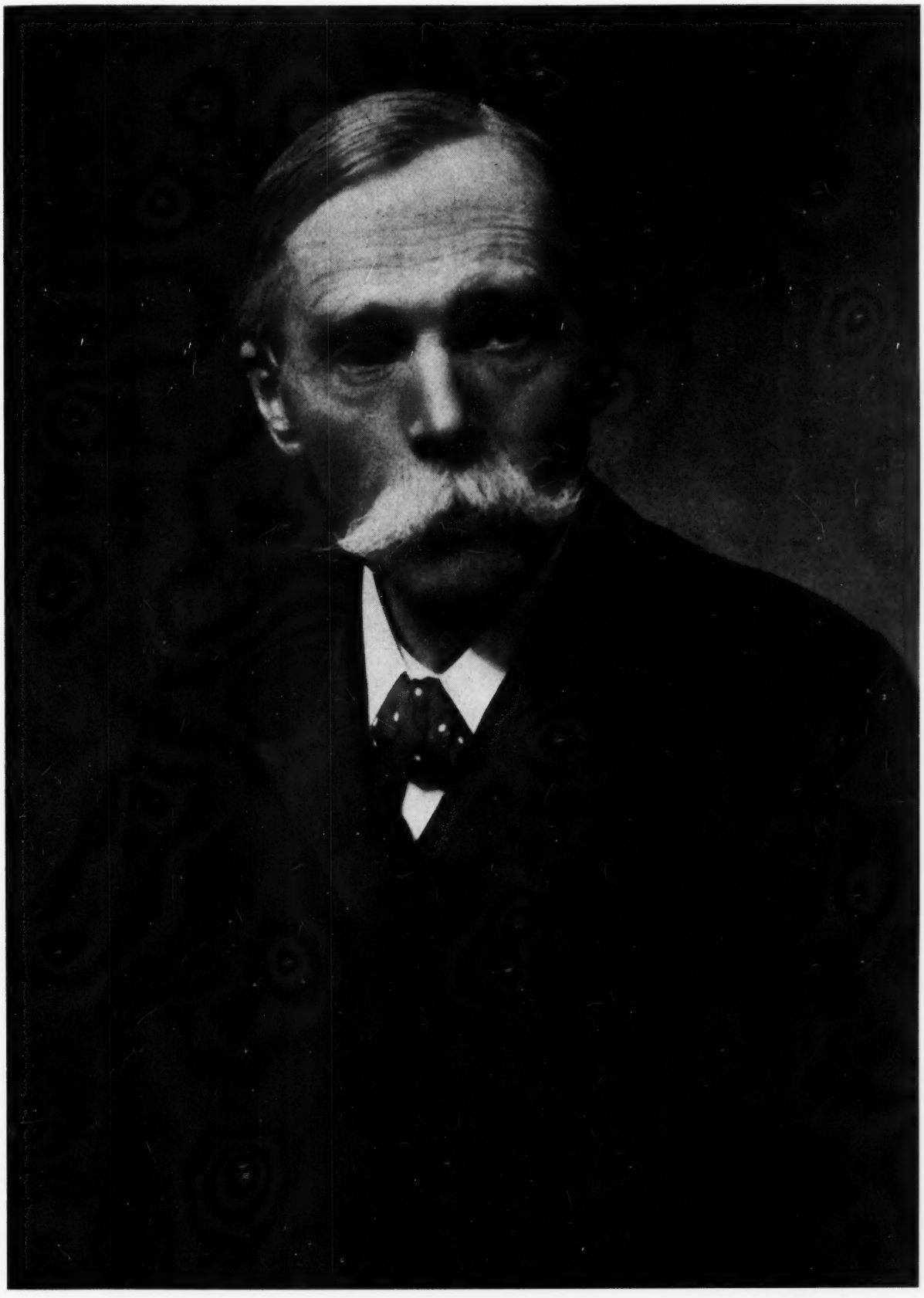
In 1880, the same year that Butlin joined the staff of St. Bartholomew's Hospital, he began his active connexion with another famed institution with which he ultimately became so closely identified. Sir Erasmus Wilson for several years delivered lectures at the Royal College of Surgeons; then in 1880 Butlin was chosen as the first Erasmus Wilson Lecturer of Pathology, holding the Chair two years. The lectures were published in a book under the title, *Sarcoma and Carcinoma, their Pathology, Diagnosis, and Treatment*, an excellent synopsis of its subject, and the first of the four more important works which were the fruit of his ripe experience. The second, one of the best type of textbooks, *Diseases of the Tongue*, first appeared in 1885. The third was *Malignant Disease (Sarcoma and Carcinoma) of the Larynx*, and the fourth, *The Operative Surgery of Malignant Disease*, of which there appeared in 1900 a second edition, including special chapters by six other surgeons experienced in the treatment of cancer of special organs. Butlin likewise issued in pamphlet form his reports, brought forward at the Brussels Congress in 1908, on the results of operations for cancer of the larynx (37 cases), and for cancer of the tongue (197 cases).

Butlin proved highly successful as a teacher, and in the earlier part of his career had numerous pupils, many being resident with him. He knew how to distinguish the unfit, among whom the teacher must include relatively intellectual youths deficient in the energy and force of character needed for a professional career. He also knew how to seek and discover the latent mental powers of boys strong and full of common sense though averse from work, who, when only guided by an able teacher, like himself, into the paths of duty and the right methods of study, can make themselves excellent doctors.

The editor of the *St. Bartholomew's Hospital Journal* (December, 1902) gracefully wrote of Butlin's merits as a teacher in the wards:

> Mr. Butlin has always delighted in clinical teaching. To go over a case with his class and dressers, to make them observe its essential features and so arrive at a diagnosis was always a source of keen pleasure to him. His method of teaching was always fresh and clear. He asked pertinent questions and expected straightforward answers. He had no compunction in exposing any one who tried to hedge, and attempts to elude him in this way were singularly unsuccessful. He acted up to his own precepts in this respect, and always had the courage to commit himself to a diagnosis. It is not surprising, therefore, that his classes were well attended, and that it was well known amongst those working for the final Fellowship examination that his Monday afternoon class was something which should not be missed.

Whilst thus rendering himself deservedly popular as a teacher, Butlin acquired high skill as an operator, especially for diseases of the throat and tongue. His practice grew large, and ultimately he was, on that account, compelled to resign his hospital appointment ere he had reached the age limit. Notwithstanding the enormous amount of physical and mental work that he undertook he managed to enjoy a considerable amount of leisure. He loved horse



Henry T. Butlin

exercise, and he made many tours in Europe, visiting remote but highly-interesting places in Spain and Italy little known to the tourist. He took deep interest in Italian pictorial and architectural work, and studied the writings of Vasari and other art critics of the Renaissance.

All members of the Association know what services Sir Henry Butlin rendered to us. At the Worcester Meeting in 1882 he was Vice-President of the Section of Pathology and Bacteriology. In 1889, at the Leeds Meeting, he filled the office of President of the Section of Laryngology. In his address he dwelt on the future position of laryngology. He noted how the specialist had taken into his domain the whole of the mouth, and even the outside of the neck. The lecturer doubted if the laryngologist would retain his hold over such advanced outworks as the neck, but added that if he should lose them it mattered little, as he could well afford to do without them. At the Portsmouth Meeting in 1899, as President of the Section of Surgery, Butlin turned attention in his address to certain questions associated with military surgery which more directly affect the civilian. He deplored the fact that of late years the use of firearms in civil life had increased alarmingly, an evil which has not decreased. At the Exeter Meeting in 1907 Butlin delivered the Address in Surgery, an exceptionally fine and important oration, "On the Contagion of Cancer in Human Beings: Auto-inoculation," which appeared, finely illustrated, in our columns. As a literary souvenir it is, however, eclipsed by Butlin's more recent Hunterian Lectures delivered at the College last autumn. Another fine public-spirited address, still familiar to all our members, was delivered by Butlin, as President of the Association, at the London Meeting in 1910, the subject being "The Evolution of the Association and its Work." Space forbids us to say more of it beyond reminding our readers that it well deserves reperusal, being a clear review of the Association's work prepared and made public by a great authority—a kind of review beyond the powers of the most conscientious, industrious, and learned official or literary historian. We must remember that whilst compiling and considering our "evolution" Butlin was discharging the arduous duties of another Presidency, that of the Royal College of Surgeons.

As to his more purely official services to the Association, we must add that he was Treasurer from 1891 to 1895, having been unanimously re-elected to that highly responsible office at the Newcastle Meeting in 1893. He modestly stated on that occasion that doubtless there were men more fitted to be Treasurer than he, but that no one could be found who had more at heart the interests and prosperity of the Association. His fitness and his zeal, already at that date so evident, were amply proved by his subsequent labours in the cause of the Association. At a meeting of the Abernethian Society in January, 1901, Butlin related to the students of St. Bartholomew's Hospital the history, character, and aims of our Association, testifying to the great services rendered to it by Mr. Ernest Hart and Mr. Francis Fowke.

During those years, when he worked so hard for us, for his hospital, and for the College of Surgeons, he had acquired a lucrative practice, yet he never flagged at scientific work. He became President of the Laryngological Society, he prepared four communications which appeared in the *Medico-Chirurgical Transactions*, and was elected Vice-President of the Royal Medical and Chirurgical Society in 1904. When it was converted, after fusion with a number of other institutions of its class, into the Royal Society of Medicine he was placed on its General Council. The Pathological Society, so closely identified with Butlin's early scientific work, he served actively almost to the year of its amalgamation. He held the chair in 1895–7, and the date of his Presidency was most fortunate. The Pathological Society of London was founded by Dr. Bentley and others after a learned association bearing the same name had been established in Dublin, in 1839, and another Pathological Society set up in Reading in 1841. On October 20th, 1846, the London Society held its first meeting, and on October 20th, 1896, it fell very happily to the lot of Butlin, as President, to deliver an address on its jubilee, a prodigious effort on his part when we bear in mind that he was at that date at the height of his active service, private and public, as an operating surgeon. Indeed, his faculty of collecting material for addresses—always a mentally and physically irksome task—and of welding them into orations that could not only be listened to but read afterwards in print with not less pleasure was phenomenal. His fluency and his elegance of diction irrigated those wholesale collections of relatively dry facts on which such addresses are necessarily founded, and rendered them both comprehensible and interesting.

Butlin devoted much time in his later years not only to the Association as we have already related, but likewise to the College of Surgeons. Having lectured with such great success in earlier years in the theatre of the College, he easily found his way into its Council in 1895 and was as easily re-elected in 1903 when he had served the regulation eight years. In 1905 he delivered the Bradshaw Lecture and in 1907 the Hunterian Oration. In 1909 he was elected President of the College, and was re-elected in 1910 and 1911. There can be no doubt that his failing health was greatly tried in 1910 when he held the chair in the Association as well. In 1911 he grew much weaker, but often drove himself to Council and Committee meetings at Lincoln's Inn in the course of the spring. On June 13th a complimentary banquet was given in his honour by the medical profession on the instigation of the Metropolitan Counties Branch of the Association at the Connaught Rooms, and Dr. Lauriston Shaw, who was in the chair, spoke highly of his services, and Butlin was quite bright as in former years when he stood up to make a long yet most pathetic and interesting speech in returning thanks. The hot weather which followed proved most trying. After his re-election in July he went to Switzerland, but the journey there and back proved quite the reverse of beneficial.

In the summer he had received the dentists at the College, and the last photograph of him was taken as he stood in the porch of the building surrounded by his guests. He showed signs of great debility, and after his return to London the laryngeal affection from which he suffered rendered speaking impossible. His two lectures on Unicellula Cancri, the Parasite of Cancer, which, published in the JOURNAL last autumn, gave rise to so much correspondence in our columns, were read from his manuscript by Dr. R. N. Paramore. On November 9th, before their delivery, Butlin resigned the presidency. The new President, Mr. Rickman Godlee, and the Council passed a unanimous resolution emphasizing the courage with which he had performed his presidential duties. It is sad to think that Butlin did not live to enjoy the well-merited titular distinction which he received from King George V on the occasion of that monarch's coronation, but was forced by ill health to retire within a few months after he became a baronet. After his resignation in November he took to his bed, from which he never rose again. For a time he was greatly distressed by increasing dyspnoea and insomnia, and on January 24th he passed peacefully away at noon. "After life's fitful fever he sleeps well." His remains were cremated on Saturday, January 27th, at Golders Green, only his nearest relatives being present.

A memorial service at St. Andrews, Wells Street, on January 29th, conducted by the Rev. H. A. Camberlege (the vicar), assisted by Prebendary Grose Hodge, was largely attended by members of the profession, including the President of the Royal College of Surgeons (Mr. R. J. Godlee), the Vice-Presidents (Mr. Mansell Moullin and Mr. Clinton Dent), the President of the Royal College of Physicians (Sir Thomas Barlow), Sir Douglas Powell, Sir J. F. Goodhart, Sir Lauder Brunton, Sir Anthony Bowlby, Sir Pearce Gould, Dr. Frederick Roberts, Dr. Samuel West, Mr. Howard Marsh, Mr. Lockwood, Mr. Furnivall, Mr. Clement Lucas, Mr. Golding-Bird, Mr. Bilton Pollard, Sir H. Paget-Cooke, Sir J. Tweedy, Sir Frederic Eve, Dr. Dundas Grant, Dr. Raymond Johnson, Mr. Makins, Sir Frederick Wallis, Sir Watson Cheyne, The Dowager Lady Broadbent, Sir John Rose Bradford; Dr. Steeves, representing Sir James Barr (President-elect), Dr. Rayner (Treasurer), and Mr. Guy Elliston (Financial Secretary and Business Manager), representing the British Medical Association; Sir H. Morris and Mr. J. Y. W. MacAlister, representing the Royal Society of Medicine, Miss Cock, representing the London School of Medicine for Women, Dr. E. H. Bashford of the Imperial Cancer Research Fund, and Mr. Smith Woodward (of the Natural History Museum); from the Royal College of Surgeons: Professor

Keith, Mr. Burne, and the Secretary (Mr. S. F. Cowell), and Librarian (Mr. Plarr).

Another memorial service was held at St. Bartholomew's-the-Less, in the precincts of the hospital, the service being conducted by the Rev. H. N. Close, the Vicar and Hospitaller. It was attended by the Lord Mayor, Sir Dyce Duckworth, Sir William Church, Sir Trevor Lawrence, Dr. Godson, Dr. Garrod, Mr. Harrison Cripps, and other members of the staff, the assistant matron, and several of the sisters.

Butlin was an Honorary Fellow of the Laryngological Society of Berlin, and was made a Membre Associé de la Société de Chirurgie de Paris but six weeks ago; only twenty surgeons receive this honour, as the Société prides itself on being highly select. He was also for a time Dean of the Faculty of Medicine of the University of London. In 1893 he received the honorary degree of D.C.L. from the University of Durham, and the University of Birmingham honoured him in a similar manner with the degree of LL.D. in 1910. He was a Governor of Rugby School.

Sir Henry Butlin married, in 1873, Annie, daughter of Mr. Henry Balderson, of Hemel Hempstead, who, with their three children, survive him. The son, Henry Guy Trentham Butlin, born in 1893, educated at Harrow, and now of Trinity College, Cambridge, succeeds to the title.

As late as December 20th, 1911, Dr. Lucas-Championnière wrote to Sir Henry Butlin the following letter announcing the honour so recently conferred upon him:

Mon cher Président,—
La Société de Chirurgie vient sur ma proposition de vous nommer Membre Associé. C'est un honneur que dans notre milieu purement chirurgical nous faisons à peu des maîtres de la chirurgie, les statuts de la Société de Chirurgie ayant décidé que vingt seulement peuvent être associés. Les correspondants sont bien plus nombreux. Vous êtes là en compagnie de Lister, de Czerny, de Durante, de Keen, de Macewen, de Reverdin, de Sonnenburg. L'hommage qui vous a été rendu a été complet, car le vote a été fait à l'unanimité ce qui est bien rare dans cette société un peu restreinte et un peu frondeuse. Vos amis ont été très heureux de le faire constater après le vote.
J'ai appris par les journaux que vous aviez résigné vos fonctions de Président du Collège Royal pour cause de santé. J'espère que ce n'a été qu'un peu de fatigue et que votre santé est aujourdhui rétablie. . . . J'ai vu que vous aviez pu continuer vos beaux travaux sur la nature parasitaire du cancer, je les suis avec le plus grand intéret.

Professor ROBERT SAUNDBY, President of the British Medical Association, writes: Twenty-five years of private friendship and public association with Sir Henry Butlin make me painfully conscious of the gap caused by his death. Perhaps his chief characteristic was his very remarkable power of impressing, even on comparative strangers, the sense of trustworthiness. We all leant upon him as the strong man, and when we had him with us we felt sure that everything would go right. This was illustrated in a remarkable fashion in 1890, when as a comparatively new member of the Council of the Association he was elected to the post of Treasurer, and at the end of his three years' term of office he was induced to accept the position for another three years. Another striking example of how men turned to him for help was when he was asked to be President of the Association in 1910, as the only man who could make the meeting a success. There were difficulties, but they melted away as if by magic when it was known that he would preside. It is hard to explain this wonderful gift, but it seems to me to have been due to the perfect simplicity of his character. He was just what he seemed to be. His affectionate manner was the indication of his kind heart, and he inspired love and confidence because he brimmed over with these qualities. He was a most effective speaker, although he had no special gift of voice or language, but he took infinite pains in the preparation of what he had to say, and for this reason his speeches were always worth hearing, and at times rose to a very high level—as, for example, on the occasion of the dinner given to him by the medical profession. That dinner was a remarkable testimony to the affectionate regard in which he was held by his colleagues in all ranks. The frail tenure by which he held his life was painfully obvious in Birmingham last July, when he fulfilled in the kindliest and most perfect manner his duties as the retiring President of the Association. Although so weak that he was scarcely fit for the effort, he insisted on going through all the ceremonial, and nothing could have been more gracious or more touching than his personal references to our long connexion in the work of the Association. He honoured the Association by the part he played in it, but he did not seem to think he was doing anything extraordinary, although the effort and the sacrifice he made were so great that no words of mine can express the gratitude I feel, nor can I acknowledge in fitting terms the debt I cannot repay.

Dr. WARD COUSINS writes: I am glad of an opportunity of contributing a few words to express my very great esteem and sincere regard for my old and generous friend and colleague, Sir Henry Butlin, who after reaching the summit of professional success, covered with honours, and in the enjoyment of the confidence and warm appreciation of all his friends, has been called away. Only a few years ago his election to the position of President of the Royal College of Surgeons caused the greatest satisfaction throughout the profession, and now the sad news of his death has produced everywhere deep sympathy and regret. At the end of last November I received from him a very kind letter which too clearly revealed to me that his splendid energy and self-sacrificing labours were drawing to a close. In the year 1885 Sir Henry Butlin (then Mr. Butlin) was appointed a Representative of the Metropolitan Branch on the Central Council, and the great value of his presence and co-operation at the meetings were recognized at once. He proved to be an excellent speaker, with a clear articulation and pleasant voice, and he soon exhibited his power of expressing his opinions in a few words with vigour and precision which never failed to arouse both attention and careful consideration. At the annual meeting in 1890 he was unanimously appointed Treasurer of the Association. Our old and much esteemed friend the late Mr. Wheelhouse occupied the chair, and I well remember the great enthusiasm of the members when Mr. Butlin's name was mentioned. The following years were a very critical period in the history of the organization, and the office of the newly-appointed Treasurer appeared to be by no means easy and free from anxiety; but his tact and good judgement, combined with a complete knowledge of every detail, soon overcame all difficulties, and his wise efforts gave a new impulse towards financial success and prosperity. In 1893 Butlin was requested to retain the office for another term, and he consented to do so. At the annual meeting held at Newcastle his re-election was carried by acclamation amid warm expressions of satisfaction from all the members. The time had now arrived when many urgent questions had to be settled having reference to the management of the JOURNAL and the general business of the Association. The number of members, too, was rapidly increasing in all parts of the country, and new branches undergoing formation at home and abroad were seeking recognition. Now Sir Henry Butlin clearly foresaw that the gradual expansion of the organization was not far ahead, and that an urgent necessity existed for securing more accommodation for successfully carrying on the various departments of the work. He had always been in favour of acquiring the site and building in the Strand, of which the Association then had a lease. It was a conviction of the real necessity for making preparation for future developments, and that an extension of the area was indispensable for the erection of a more commodious building, which induced him strongly to recommend the purchase of several adjoining houses; this advice was at once acted on. I have often thought over this wise anticipation, and it is an interesting fact that the valuable property in the Strand and Agar Street was secured two years after, and that the conveyance was duly signed on March 24th, 1898. When the annual meeting was held in London during 1910 Sir Henry Butlin was rightly selected for the Presidential chair, and it was the unanimous desire of the profession that he should be requested to accept the office, for throughout his life he had never lost an opportunity of doing all in his power to promote the interests of the Association. Now, on reviewing the stress and pressure of all his professional duties, we feel sure that he must have possessed physical strength and strong self-control far above the normal. His high intellectual qualities were always visible in combination with the power of mental concentration and ceaseless energy.

He will be for ever remembered as a brilliant surgeon and lecturer in one of the largest medical schools in the kingdom, as an able worker and writer on the ever advancing sciences of surgery and pathology, and also as a zealous investigator in striving to unravel the deep problems of disease. We mourn to-day that his work is over; but we are confident that he has left behind an enduring memorial of his devoted life and that his name will have a place with the leading and distinguished surgeons of our day.

Dr. LAURISTON SHAW, who was one of the local honorary secretaries of the annual meeting of the British Medical Association in London in 1910, has responded to our request by sending the following appreciation of Sir Henry Butlin's work as President of the Association on that occasion:

Sir Henry Butlin, who had always taken the keenest interest in watching the progress of the Association since his period of Treasurership some years before, became once more actively engaged in its work by accepting the Presidency in 1910. The opportunity occurred of offering to him this, the highest honour in the gift of the Association, in consequence of the decision to hold the annual meeting for 1910 in London. There can be no doubt that Sir Henry was genuinely gratified at this further indication of the regard in which he was held by his professional colleagues, whilst it was clear that the profession generally endorsed in the heartiest manner the decision that the surgeon who had already attained to the foremost position in his technical art as President of the College of Surgeons of England should be invited to hold at the same time the headship of the Association representative of the whole profession of the Empire.

As was foreseen by all who knew Sir Henry Butlin well his occupancy of the Presidency was eminently satisfactory to the profession. Its period corresponded with a time of much anxiety to medical practitioners throughout the United Kingdom. During his year of office the National Insurance Bill was introduced into Parliament and the negotiations between the Government and the profession were initiated, the final results of which are awaited with grave anxiety. The President's genuine appreciation of the representative position of the Association and of its sole right to accept the responsibility of speaking on behalf of medical practitioners as a body was a great source of added strength to the profession in impressing its wishes upon the Government. At the present critical juncture Sir Henry's sagacious advice and wise leadership will be sorely missed. In his position as President Sir Henry Butlin played the leading part in welcoming the Association to London and much of the success of the meeting was due to the enthusiasm and energy with which he put himself at the head of all the movements for promoting both the scientific and social aspects of the gathering. His Presidential Address will long be remembered as an eloquent and convincing appeal for courage and patience in promoting the highest interests of the profession by the united action of its members. The historical summary of the tedious processes by which the profession had in the past secured its unselfish aims for the public good in face of public apathy and opposition constituted a real oratorical triumph in the severely restrained style which was always a pleasing characteristic of Sir Henry Butlin's addresses. The President, by the keen interest he took in the scientific work of the various sections, and in the almost unique medical museum collected for the occasion, gave great encouragement to the voluntary workers in these departments. Sir Henry and Lady Butlin, by the lavish hospitality they offered to the distinguished visitors and foreign guests at the annual meeting, still further increased the reputation they had already achieved as being the most generous and genial of hosts amongst the medical profession in this city.

Mr. BRUCE CLARKE, the present Senior Surgeon to St. Bartholomew's Hospital, writes as follows: It is difficult to realize that Sir Henry is gone from us. It is nearly forty years since I first met him, when I was a new dresser and he a recently appointed surgical registrar, and we have been friends ever since.

I well remember how ready he was to help the new dresser, and how impressed I was by the thoroughness with which he investigated every detail that could throw light on the disease of the patient.

The microscopic examination of morbid products was then in its infancy, and this was the point on which his interest was centred. One felt one could learn more pathology from him than from any one else. When I was working for the second F.R.C.S. examination, he offered to show me some microscopic sections, and I well remember going to his house to look at them, and being amazed at the immense number of specimens he had, and at the wonderful way in which Mrs. Butlin (as she then was) unearthed any slide that he wanted, and seemed to know all about it.

When he was elected assistant-surgeon a new side of his nature seemed to develop. Up to this time he had appeared to some of us to be too pathological. We had not realized how good a clinician he was. No sooner, however, did he become demonstrator of practical surgery and assistant-surgeon, than he came to be recognized as a surgeon of sound judgement, whose knowledge of pathology was destined to play an important part in helping his clinical investigation of disease. Whatever he had to do, he did well, because he had mentally rehearsed it beforehand. Of nothing was this so true as of a surgical operation. He operated well because he knew exactly what he meant to do, and he did it.

He lectured well because he was determined to master his subject and to put it before his audience with as near an approach as possible to that clearness of exposition and charming delivery which he had so often heard from the lips of his revered master, Sir James Paget, whom he ever delighted to talk about.

Each year his reputation as a clinical teacher grew, but he taxed his strength to the uttermost, often beyond the bounds of prudence. As his practice grew he gave up first his lectureship on surgery, on which subject few have ever lectured better, and then his surgeoncy, because he could stand the strain no longer, and because every bit of work, speeches included, was prepared with an elaborate care that few can realize.

His more recent work, his election to the Presidency of the Royal College of Surgeons and to that of the British Medical Association, is familiar to all and needs no appreciation from me. The same urbanity, the same desire to be of help to others, was as much to the fore when the honours of later life fell upon his shoulders as they had been when he was but a surgical registrar.

The leisure of retirement had no charms for him. He loved work and would have worked on to the end if he had thought he could do the work that had been entrusted to him as he wished it to be done. As soon as he felt that was impossible he bowed to the inevitable and surrendered.

Dr. DUNDAS GRANT has supplied us with the following appreciation of Sir Henry Butlin's work as a laryngologist: Butlin was President of the Laryngological Society during the year 1897-98, having been previously and for some time afterwards a frequent attendant at the meetings. He examined the cases and discussed them in their purely laryngological aspect with all the keenness and receptivity of a student, and raised the value of the discussions as well by his experience in the throat department of St. Bartholomew's for a considerable number of years, as by his general surgical grasp of the subject and the sound pathological basis which his early researches had afforded him. His work on carcinoma and sarcoma (of the larynx) became of course a classic. It is to him that the full value of thyrotomy in the treatment of early and limited epithelioma of the interior of the larynx is due, but he was somewhat conservative in regard to total extirpation, though of late years he formed a more favourable opinion of the radical operation. Up till recently he was an occasional attendant in the Section, and always took an interest in it. At all times he displayed great patience in relation to the expressions of opinion on the part of younger men, and his criticism of them, when they got rather wild, was usually accompanied by such good-natured banter and so merry a little twitch of his eyelids, that he never failed to make a pleasant as well as a strong impression. His example was a very valuable one in regard to general "tone," and he did a great deal to prevent

British specialists from becoming too narrow in their views. I am sure you will find these impressions confirmed by any of the habitual members of the society.

Dr. F. DE HAVILLAND HALL writes: My intimate acquaintance with Sir Henry Butlin dates from the spring of 1868, when he told me that he had been appointed House-Surgeon to Mr. Paget, and he asked me if I would come on as dresser. It is hardly necessary to say that I eagerly accepted the offer, and for six months I was in daily contact with Butlin. Even in that early period of his career he showed of what mettle he was. His work in the surgery and wards was performed with exactness, nicety, and punctuality. With such a House-Surgeon acting under a Surgeon of Mr. Paget's distinction, the dressers had an excellent time, and we were all very sorry when it came to an end. Butlin had a wonderful power of getting his own way with dressers, Sisters, and nurses without friction, and his bright countenance and cheery smile were very attractive. After his house-surgeoncy he accepted a post as assistant at Charing in Kent. He wrote to me from there saying that he was getting valuable experience, but that he intended returning to London. I next saw him when he was Surgical Registrar at Great Ormond Street. In 1876 we again came into very intimate intercourse, as we lived opposite each other in Queen Anne Street, and we frequently walked together to the casualty department at St. Bartholomew's Hospital. He had usually something to say bearing on professional subjects, and much valuable information I picked up from him durings these walks. I often used to look in upon him in Queen Anne Street shortly before midnight, and I almost always found him at work with the microscope, assisted by his devoted wife. Though so keenly interested in his professional work, he had a high appreciation of music and art, and I look back with great pleasure to the fact that my first visits to the opera and to the Royal Academy were in his company. He had the gift of doing everything he took up thoroughly well. He was much interested in cricket and a keen lawn-tennis player; even in such trivial games as Halma he usually came out victorious. Of late years riding was his hobby, and on horseback he looked like a cavalry officer. In the above remarks I have endeavoured to give a picture of how Butlin appeared to those who came into close contact with him. I would only add that he was the kindest and most generous of friends.

ONE WHO WORKED WITH HIM FOR FORTY YEARS writes: I always think that Butlin in his life and work tried to carry out the motto over the door of the school buildings of the great hospital he loved so well: "Whatsoever thy hand findeth to do, do it with thy might." Latterly, when sometimes asked if to-morrow would not do for some piece of work, he would say, "No; if I cannot do my duty, I must resign." And then came the day when he said, "I'm done; I *must* resign" (the Presidency of the Royal College of Surgeons). His end was perfectly peaceful—a little deeper sleep.

EUGENE STEPHEN YONGE, M.D.EDIN.,

PHYSICIAN, MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.

By the death of Dr. E. S. Yonge, Manchester has lost one of its most promising young specialists in diseases of the nose and throat. Though a comparatively young man, Dr. Yonge had for some time been in indifferent health, and he was so thoroughly devoted to his professional work that there is some fear that he did not take sufficient rest, and the arduous work involved in getting out his last work on *Diseases of the Nose and Throat* probably contributed to his final breakdown.

Dr. Yonge graduated at Edinburgh M.B., C.M. in 1891, and proceeded to M.D. in 1897. He spent some time in post-graduate work at Vienna, Berlin, and Paris, and acted as Assistant House-Surgeon at the South Devon and East Cornwall Hospital and also as House-Surgeon at the Manchester Southern Hospital for Women. He never took any active part in medico-politics, though he has been a member of the British Medical Association for many years and acted as Honorary Secretary of the Section of Laryngology at the annual meeting of the British Medical Association in 1892. Soon after graduating he began to take special interest in diseases of the nose and throat and made this his practical life-study. He brought to the work a remarkable power of invention, and devised several methods of operating on the nasal cavities which are now recognized as most efficient. His writings on rhinology are voluminous, and in addition to his special works on *Polypus of the Nose* and his handbook on the *Diseases of the Nose and Throat*, may be mentioned his articles on "Polypus of the Tonsils" in the BRITISH MEDICAL JOURNAL of 1901, and his *Observations on the Determining Cause of the Formation of Nasal Polypus*, 1907. He made a number of original researches on the cause of common colds and the surgical treatment of paroxysmal rhinorrhoea and hay fever, and his recently published suggestions for the surgical treatment of hay fever by resection of the nasal nerve have been keenly discussed and received very favourable comment. In pursuance of his work on hay fever he went as an English representative to the hay fever section of the International Hygiene Exhibition at Dresden in 1911. For some years he had been Honorary Physician to the Crossley Sanatorium at Delamere and the Manchester Hospital for Consumption and Diseases of the Throat. In this position he endeared himself to the numerous patients who came under his care, who will remember him not only for his skilful manipulation but for the kindly consideration and sympathetic manner in which he carried out his duties.

CHARLES WARDEN, M.D., F.R.C.S.EDIN., J.P.,

HONORARY CONSULTING SURGEON TO THE BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL AND TO THE BIRMINGHAM ROYAL ORTHOPAEDIC AND SPINAL HOSPITAL.

WE record with regret the death of Dr. Charles Warden, which occurred at his residence at Weston-super-Mare, on January 13th, at the age of 85. He was born in Bristol Road, Birmingham, in 1827, and was the youngest surviving son of the late Mr. Joseph Warden, who, before the incorporation of Birmingham, was one of the Commissioners in whom was then vested the government of the town. Dr. Warden was educated at the Edgbaston Proprietary School, after which he commenced his professional studies at Queen's College, under the eminent chemist and metallurgist, Dr. Percy. From the Queen's College he went in 1845 as a student to St. George's Hospital, where he had a successful career, taking honours in chemistry. He studied for nearly two years in the Paris medical schools and hospitals, took the diploma of the R.C.S. in 1850, and spent the winter of that year at the University of Aberdeen, where he took the degree of M.D. He became F.R.C.S.Edin. in 1878.

In 1851 he was appointed House-Physician at the Westminster Hospital, and in the following year was elected Resident Medical Officer at the Lying in Hospital, Birmingham, to which institution he was afterwards appointed Honorary Surgeon. He commenced private practice in 1854, and four years later became one of the honorary staff of the Birmingham General Dispensary, a post he occupied for several years. In 1856 he was appointed honorary medical officer to what was at that time called the "Institution for the Relief of Bodily Deformities," a charity which he helped to organize as the Orthopaedic and Spinal Hospital. As honorary medical officer to the Institution for the Relief of Deafness, to which he was appointed in 1858, he developed the charity by adding to it the treatment of diseases of the throat, and largely through his exertions the institution grew into the Ear and Throat Hospital, to which he was honorary surgeon for many years, and was later appointed consulting surgeon. On the resignation of Mr. Alfred Baker in 1876, Dr. Warden became honorary surgeon to the Royal Institution for Deaf and Dumb Children.

He was one of the original members of the University Graduates' Club, and at one time its President. Among other distinctions he held was President of the Otological Section of the British Medical Association, at the annual meeting held in Birmingham in 1890, and President of the Birmingham Medical Benevolent Society in 1888, being also a member of its Court of Directors for four years.

Among his contributions to medical literature were papers entitled "Osteotomy in the Treatment of Genu Varum and Genu Valgum" and "Deaf-mutism and Consanguineous Marriage," published in our columns. He was

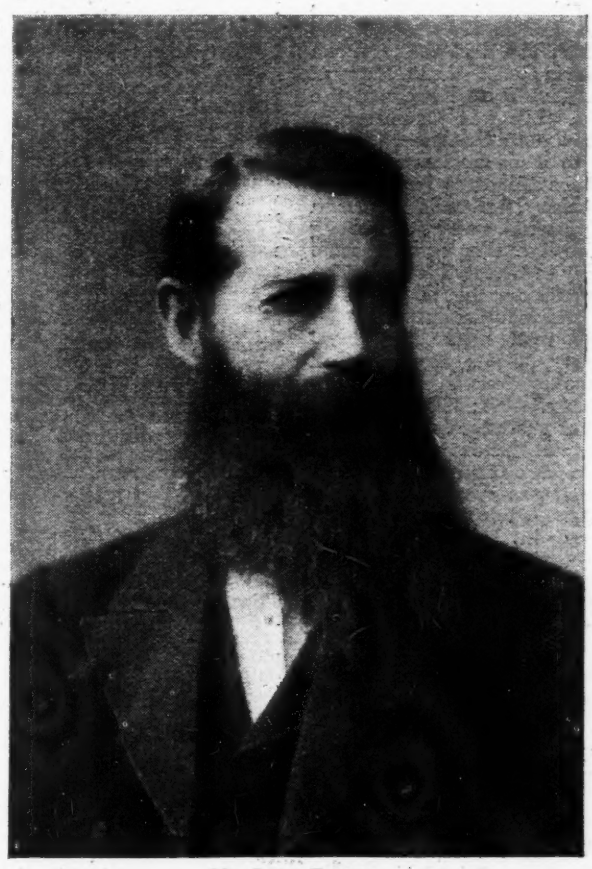
an active member for many years of the Birmingham and Edgbaston Debating Society. In 1892 he was appointed a magistrate for Birmingham. Dr. Warden married in 1856 Eliza Mary, daughter of the late Mr. Allen Everitt.

JAMES TAYLOR, F.R.C.S.Eng., J.P., Etc.,

CONSULTING SURGEON TO THE CHESTER GENERAL INFIRMARY; PAST-PRESIDENT OF THE LANCASHIRE AND CHESHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

On Sunday afternoon, January 14th, Chester suffered a severe loss by the death, in his 72nd year, of Mr. James Taylor, one of its most esteemed citizens.

He was born at Chapel-en-le-Frith, Derbyshire, on St. Luke's Day (October 18th), 1840, and, when quite a youth, was apprenticed to the late Dr. Loney of Macclesfield. The latter having an appointment as medical officer to a workhouse, his young apprentice was soon called upon to attend nearly all the normal labours at that institution, and in this way acquired an experience in practical midwifery which proved of great value to him in the early days of his practice. He once told the writer of this notice that he attended over a thousand cases of midwifery before he was qualified, and showed him a book, most neatly kept, containing a note of every case from first to last.



MR. JAMES TAYLOR

Photograph by] [*Clarke Cambridge.*

He acquired his medical education proper at Anderson's College, Glasgow, and Mason's College, Birmingham. He took the diploma of L.S.A. in 1864, and those of M.R.C.S.Eng., and L.R.C.P.Lond. in 1865 and 1866.

After trying practice for a short time in Oxfordshire he went to Chester in 1868 as one of the Resident Officers at the infirmary. Two years later he started practice in the city, and was very soon elected Honorary Surgeon to the Infirmary—a position he held until 1907, when he was made Consulting Surgeon.

He very soon gained the confidence of the public, and it speaks well for his energy and determination that he found time to prepare for the diploma of F.R.C.S.Eng., which he took in 1882, while engaged in the exacting work of an ever-increasing practice.

Mr. Taylor's work for the Chester Infirmary was publicly acknowledged by a valuable presentation made to him in 1907, on his retirement from the position of Honorary Surgeon; it took the form of a valuable antique clock and candelabra, a beautiful silver tea and coffee service, and a cheque for £200.

In addition to his large city practice he had a large consulting practice in Cheshire and North Wales. Although surgery was his speciality, he was a splendid type of the all-round medical man, and his opinion was much in request in purely medical cases. As an operating surgeon he was self-reliant and quick in his methods, and specially good in abdominal cases.

An active member of the British Medical Association, he was President of the Lancashire and Cheshire Branch in 1903, and frequently attended the Annual Meetings. Had his health permitted it he would have liked to have taken an active part in the opposition to the Insurance Bill.

He was twice President of the Chester Medical Society, and one of its founders. He was Consulting Surgeon to the Wrexham Infirmary, and formerly a Vice-President of the North of England Obstetrical Society. He was also medical referee for the district under the Workmen's Compensation Act. In 1897 he was made a Justice of the Peace for the city and frequently sat on the bench.

The Mayor of Chester, on taking his seat at the police-court on January 15th, referred to Mr. Taylor's death and spoke of him as one of Chester's most distinguished citizens. His name, he said, was a household name in the city. He was a friend of all with whom he came in contact, and his public services to the city as Honorary Surgeon to the infirmary and also on that bench would be sorely missed. He was voicing the feelings of all the magistrates when he said they mourned with his family the loss of one whose place it would be hard to fill. Their sympathies went out to the bereaved wife and family. Colonel Evans Lloyd said, as one who had been so long connected with the infirmary, having been for thirty-five years a member of the board and for twenty years chairman, he was thrown into frequent contact with their dear friend, Dr. Taylor. He could only say that he was the backbone of the institution, and was noted for his kindness and distinguished services. He was especially considered to be a devoted adviser and friend of the nursing staff, and they all knew him as a kindly and distinguished friend of the institution.

He was intensely fond of his profession, which was his hobby. Of a strong, self-reliant, somewhat rugged, but very lovable nature, he was held in affection and respect by poor and rich alike. He was extremely sympathetic towards the younger members of the profession, who never failed to find in him a true friend and wise counsellor in their worries, whether private or professional. It was always pleasant to have him as consultant, he was so helpful and full of encouragement. He was always most careful to try and inspire the patient and his friends with confidence in their family attendant. He was attended in his last illness by his son, Dr. George Taylor, and by Dr. Mann, who had formerly been in partnership with him. He also went to London to see Dr. Hale White, Mr. Herbert Tilley, and Mr. A. D. Reid about his complaint. Condemned to die from an incurable and inoperable disease, he met his fate with calmness and courage. His desire to carry on his work to the very end was almost fulfilled, for he attended his last consultation in North Wales only four weeks before he died.

He was laid to rest in the Chester Cemetery in a blinding snowstorm on January 17th. He left a request, that should the weather be cold or wet mourners were to keep their hats on at the graveside. A service held previously at St. John's Church was attended by a large congregation, among whom were many doctors from the city, the county, and North Wales, in addition to civic dignitaries and the general public.

Mr. Taylor is survived by a widow, two sons, and two daughters. His eldest son, Dr. George Taylor, is in practice in Chester and one of the honorary physicians to the infirmary.

CECIL YATES BISS, M.D., F.R.C.P.LOND.,

FORMERLY PHYSICIAN, BROMPTON CONSUMPTION HOSPITAL AND MIDDLESEX HOSPITAL

DR. CECIL YATES BISS, who died on January 20th, after a disabling illness extending over twelve years, was educated at Cambridge and St. Bartholomew's Hospital. His career at the university was highly distinguished. He was a Foundation Scholar of Downing College, gained the Winchester University Prize, and took a First Class in the Natural Sciences Tripos in 1875. He also took a First Class at the Final Examination for the M.B. in 1880. In the same year he was admitted a Member of the Royal College of Surgeons of England. He proceeded Doctor of Medicine in 1884, and was elected a Fellow of the Royal College of Physicians of London in 1889. He held many professional appointments, being Physician to the Brompton Consumption Hospital and Physician to Out-patients at the Middlesex Hospital. This appointment he held for seventeen years; during the latter part of that time he had beds in the wards of the Senior Physician. He was also the first Lecturer on Pharmacology and Therapeutics in the Medical College of Middlesex Hospital after Dr. Thorowgood resigned the lectureship on materia medica. He was Examiner in Medicine and Materia Medica to the Apothecaries' Society. He was Consulting Physician to Friedenheim (Home for the Dying), and at various times Honorary Physician to the Westminster General Dispensary, Assistant Physician to the Metropolitan Free Hospital, and Consulting Physician to St. Saviour's Hospital. He was for some time Demonstrator of Physiology to Selected Teachers at South Kensington. Dr. Biss was the author of papers on the treatment of pus-secreting basic cavities of the lung by paracentesis and free drainage, read before the Royal Medical and Chirurgical Society (1884); circumscribed scleroma associated with pulmonary stenosis, a communication made to the Clinical Society (1889); on the diagnosis and treatment of certain forms of gastralgia, published in the *Practitioner* in 1891; a report (in conjunction with Sir Alfred Pearce Gould) of a case of intussusception treated by laparotomy, terminating in complete recovery (1892); a clinical lecture on intrathoracic aneurysm, published in the *Clinical Journal* in 1896; and other contributions to medical literature.

Had not Dr. Biss's scientific work and professional activity been rudely interrupted by a stroke of hemiplegia which made him an invalid for the remainder of his life, he would doubtless have fulfilled the promise of an exceptionally brilliant career of which his early successes and his devotion to work had given token. To himself death must have come as a merciful release, but he leaves many friends to mourn the loss of a gifted spirit.

DR. ESSEX WYNTER writes: Dr. Cecil Yates Biss began his career as a teacher in New Zealand, coming with two companions to England in 1872. Dr. Biss was a strong teetotaler and opponent of tobacco, and rather given to admonishing his patients in regard to excesses and irregularities in living, in addition to ministering to their immediate ailments. He was a leader among the Plymouth Brethren, deeply versed in Scripture, and a fluent speaker. He took a serious view of life, and his tall, rather portly figure lent weight to his admonitions. He had a good voice, genial manner, and remarkably even temper, and in committee was a steadier of discussion, and prone to regard matters from a broad standpoint as parts of a wider system.

CHARLES DAVIDSON, M.D.,

COVENTRY.

WE regret to record the death of Dr. Charles Davidson, which took place at his residence in Priory Row, Coventry, on January 21st, after a very short illness. Dr. Davidson, who was 62 years of age, was a native of Aberdeen, and he took the degrees of M.B., C.M. of that university in 1871. After receiving the M.D., he went to Coventry in 1878. He was appointed to the medical staff of the Coventry Dispensary, and was attached to that institution until about eight years ago, when he resigned. Since that time Dr. Davidson has continued in private practice at Priory Row. He was a past-Chairman of the Coventry Division of the British Medical Association. In politics he was an ardent Conservative, and at the time of his death he was Chairman of the St. Mary's Ward Conservative and Liberal Unionist Association. He leaves a son (Dr. Duncan Davidson) and a daughter.

The body of the late Dr. Davidson was cremated at Perry Barr on January 24th, and the funeral, which was largely attended, took place on the following day at Coventry.

Medico-Legal.

ACTION AGAINST THE BRITISH MEDICAL ASSOCIATION.

THE case in which Dr. Robert Bell is suing Dr. E. F. Bashford and the British Medical Association for libel came before the Court of Appeal, consisting of Lord Justice Farwell and Lord Justice Kennedy, on January 30th, by way of an appeal by the plaintiff from the decision of Mr. Justice Bucknill in chambers refusing to strike out certain portions of the defence entitled "Particulars of public interest."

Mr. Herbert, for the plaintiff, said it was an action for libel by Dr. Robert Bell, a duly qualified medical practitioner, against Dr. Ernest Francis Bashford and the British Medical Association in respect of a libel which appeared in the BRITISH MEDICAL JOURNAL, written by Dr. Bashford, and published in what was called a "Special Quackery Number," dealing solely with quacks of all kinds and descriptions. Dr. Bashford's contribution was entitled "Cancer, Credulity, and Quackery." In that article he attacked those who were opposed to him in the treatment of cancer, and mentioned the plaintiff by name. The plaintiff for a number of years performed surgical operations for cancer, but he afterwards came to the conclusion that different treatment was required. His views differed from those of Dr. Bashford, who had, in the article referred to, attacked those who opposed him in the treatment of cancer. The plaintiff complained that these articles by Dr. Bashford meant that the plaintiff was a quack and an impostor, and that he attempted to impose on the credulity of the public, and thereby was guilty of professional misconduct. The defendants denied that the articles were published with any defamatory intention, and pleaded that the facts were true, and that the comments were fair and bona fide comments, without malice, on matters of public interest. That was a plea of fair comment only, and particulars of public interest had been delivered in support of that plea. It was those particulars the plaintiff objected to, because they were really in support of justification which had not been pleaded. These particulars of public interest, it was contended, really amounted to a repetition of the old libel rather made a little stronger. Some portion of them read almost like a final speech to the jury, and counsel strongly objected to them as likely to be embarrassing to his case when it came on for trial.

Mr Colam, for the defendants, said they had not called the plaintiff a quack, because it was expressly stated that he was a duly qualified medical man; but what was said was that his teaching was more dangerous than that of a quack, because of its half-truths, which were more likely to mislead people. They actually quoted illustrations from the plaintiff's own writings; and his claim was based on portions of the articles taken out and pieced together. The defendants had given the particulars of facts complained of in order that the plaintiff at the trial could not say he was taken by surprise.

At the conclusion of Mr. Herbert's argument for the plaintiff, Lord Justice Farwell said they saw no reason to interfere with the discretion of Mr. Justice Bucknill. They did not see how the plaintiff could be hurt or embarrassed in any way by these particulars. The plaintiff ought to be grateful for them, because he had fair warning of the case the defendants were going to make.

Lord Justice Kennedy concurred, and the appeal was dismissed with costs.

The Services.

LAWS AND CUSTOMS AS TO SICK AND WOUNDED.

MAJOR K. BRUCE BARNETT, R.A.M.C. (Sandgate) writes that "Territorial Medical Officer" should consult Professor T. E. Holland's book on the subject, price 6d. (latest edition), and read the article in the *Journal of the Royal Army Medical Corps*, September, 1909.

LIEUTENANT-COLONEL R. T. HALLIDAY, R.A.M.C. (Territorial Force) (Glasgow), writes: I would refer "Territorial Medical Officer" to a very full article on "The Geneva Convention," by Colonel W. G. Macpherson, C.M.G., published in the *Journal of the Royal Army Medical Corps*, being a lecture delivered by that officer at Cambridge University Law Schools, on the invitation of the Professor of International Law. The whole question is fully discussed and explained, and the article should be quite sufficient for the examination referred to.

ASTON writes: A full and very interesting account of the late Geneva Convention is to be found in *War Rights on Land*, by Spaight. The examination referred to is not difficult.

Medical News.

SIR ERNEST HATCH, Bart., has accepted the office of Treasurer of the Corporation of University College Hospital and Medical School.

THE annual dinner of the Association of Public Vaccinators of England and Wales will be held at the Midland Hotel, Birmingham, on Friday, March 1st, at 6.30 p.m.

THE annual dinner of the West London Medico-Chirurgical Society will take place in the Wharncliffe Rooms, Hôtel Great Central, on Thursday, February 8th, at 7.30 for 8 p.m.

AT the meeting of the Roentgen Society to be held at the Institute of Electrical Engineers, Victoria Embankment, on Tuesday next, the Honourable R. J. Strutt, F.R.S., will read a paper on after-glow in vacuum discharge tubes.

DR. LEONARD HILL, F.R.S., and Dr. Martin Flack will read a paper on the influence of ozone in ventilation at the meeting of the Society of Arts, Adelphi, W.C., on Wednesday next at 8 p.m., when Lord Sanderson, G.C.B., K.C.M.G., will preside.

THE estate of the late Dr. Thomas Henry Stocker Pullin, of Sidmouth, who became M.R.C.S., L.S.A., in 1850, M.D.St. Andrews in 1862, and F.R.C.S.Edin. twenty years later, has been sworn at a net value of £90,560. For many years he was medical officer of health for the district, and also in private practice.

FOUR lectures on sleeping sickness will be given by Dr. F. M. Sandwith, Gresham Professor of Physic, on Tuesday, Wednesday, Thursday, and Friday, February 13th to 16th. The lectures will be given at the City of London School, Victoria Embankment, E.C., at 6 p.m. on each day, and are free to the public.

PROFESSOR SIMON FLEXNER, director of the Rockefeller Institute of Medical Research, New York, will deliver the course of Harben lectures at the house of the Royal Institute of Public Health, 37, Russell Square, W.C., on February 26th, 27th, and 29th at 6 p.m. The subject of the course is local specific treatment of infections.

A LECTURE upon "Malady and Melody, or the Influence of Music in the Healing Art," will be delivered by Dr. G. Norman Meachen on Tuesday, February 6th, at 8 o'clock, in the Vestry Hall of St. Paul's Church, Canonbury, N. Miss Florence Holdernesse, among others, has kindly consented to assist with vocal illustrations. The price of admission is 1s.

ACCORDING to the last American census, there are 130,000 practitioners of the healing art in the United States. This number includes osteopaths, psychopaths, hydropaths, and other irregular practitioners, as well as members of the medical profession. It is estimated that there is one doctor to every 650 of population in the States, and the average income is computed at £240 a year.

AT a meeting arranged by the Royal Sanitary Institute at the Poor Law Offices, Shakespeare Street, Nottingham, on Saturday next, February 10th, a discussion of local public health administration and the Insurance Act will be opened by Alderman T. J. Dabell, M.R.C.S., Chairman of the Health Committee, Nottingham. The chair will be taken at 11 a.m. by Dr. Louis C. Parkes, Deputy Chairman of the Council of the Institute.

REGULATIONS have been issued with regard to the sale of preparations of ammonia requiring that such a preparation shall only be sold in bottles distinguishable by touch from ordinary bottles, and labelled with the name and address of the seller and the word "poisonous." The regulations, which come into force on February 1st, apply to grocers, oil and colour merchants, general dealers, and chemists, and the penalty for failure to observe them is £5.

MR. FREDERICK HALLETT, Secretary to the Examining Board of the Royal Colleges of Physicians and Surgeons, will leave for the United States at the end of this week, accepting an invitation issued by the Council on Medical Education of the American Medical Association to attend the Conference on Medical Education to be held at Chicago on February 26th, and to address the meeting on the subject of the methods of conducting examinations for licences to practise medicine adopted by the Conjoint Examining Board in England. Mr. Hallett will further, at the request of the English Colleges, study the standards of education and the range of the curriculum required for various university degrees which are recognized by the English Boards.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

BETA wishes to know of a reliable hair dye for darkening grey hair—one that will not injure the hair or the skin.

L.M.F. asks for experience in the use of massage or electrical treatment in hemiplegia due to cerebral haemorrhage; the case in which he is interested is of seven weeks' duration.

QUAESTOR asks for assistance in making a diagnosis in the case of a middle-aged man who suffers from a thin mucous discharge from the left nostril when eating or drinking, but at no other time.

GLAUCUS, having a patient suffering from spasmodic asthma, who wishes to reside in London, or suburb, would be glad to hear of suitable districts that possibly might agree with him. The patient finds that dry and more elevated districts with gravelly soil best suit him.

M.S.S. asks for advice in the treatment of a man, aged 32, who for the last fifteen months has suffered from attacks of neuralgic pain in the scrotum, prepuce, and the inner surface of the thighs, lasting mostly for thirty-six hours, and followed next day by herpetic eruption on the prepuce and glands, ending in small clean-cut ulcers, with yellow sloughy bases, which take one to three weeks to heal. The interval between the attacks is decreasing; there is no history of syphilis, or other constitutional disease.

THE URINE AFTER PROSTATECTOMY.

J. asks for information in regard to the condition of the urine some time after the prostate has been removed for hypertrophy. In the case in which the inquirer is interested there was only one sharp attack of cystitis just before the operation. Before this the urine was normal, but since the operation always contains an abnormal amount of mucus, generally in threads and wisps, an appreciable number of dead leucocytes, and often a trace of albumen. The reaction is acid. Our correspondent asks whether the condition is of any real importance, and if anything could be done to remedy it. His own opinion is that the prostatic portion of the bladder has remained in a slightly catarrhal condition, and anything like washing out would only increase it by the catheter irritating the urethra and bladder.

NURSES AND ASSURANCE.

W. E. H. recently examined a nurse for a personal accident insurance, and in sending the proposal to the company inquired what fee he was to be paid for his examination. The company referred him to the Nursing Association, and added: "We believe that these examinations are usually made free of cost by medical men who are interested in nursing and the Nursing Association."

*** If a nursing association be run in hearty co-operation with local medical men there would appear to be no objection to the latter making some allowance or even making the examination for nothing; if the examination is to be paid for by the insurance company, and not by the nurse or the association, there can be no claim for gratuitous work.

INCOME TAX.

MEDICO has recently started a new practice, and estimates the excess of his first year's expenses over the receipts at £200. He possesses some £400 a year from investments, the income of which is taxed by deduction, and inquires whether there is any means of deducting his professional loss from his taxed income and obtaining repayment of part of the tax paid.

*** As soon as our correspondent has completed his first year he should prepare an account of his professional earnings and expenses and send it to the Surveyor of Taxes, with a request for repayment of income tax under the Customs and Inland Revenue Act, 1890. The application should be accompanied by vouchers showing that income tax has been deducted from the remainder of his income. If the loss prove to be £195 the repayment due will be on £355 at 1s. 2d. in the £, made up of £195 and the abatement of £160

ANSWERS.

PUTTING SALT ON A DEAD BODY.

S. D. C. writes: According to Brand's *Popular Antiquities*, this custom is supposed to indicate the immortality of the soul.

ELECTRIC BICYCLE LAMP.

DR. F. S. JACKSON (Aberdovey) writes: In answer to query of "Country Practitioner" as to electric bicycle lamp, I can strongly recommend the "Ever Ready," to be obtained from Gamage's, Holborn, W.C., price 8s. 6d., refills 9d. I have had one in constant use for about three years, and find it very handy and convenient.

A. B. L. writes: I can recommend "Country Practitioner" to try the "Ever Ready" dry battery lamp, which is put on the market by Messrs. Browne Brothers, 15, Newman Street, London, E.C., or Deansgate, Manchester. These lamps are made in two sizes, 6s. 6d. and 8s. 6d. I have been using the smaller size for the past eighteen months, and find it very satisfactory. The battery lasts about ten hours (sufficient for three months' intermittent burning). Refill batteries for the small lamp cost 9d., for the large lamp 1s.

DR. GRAHAM GRANT (London) also recommends "Country Practitioner" to apply to the cycle department at Gamage's.

INCOME TAX AND BILLS OF SALE.

ENQUIRER.—If the terms of the bill of sale are such that our correspondent is required to pay a certain rate per cent. per annum on the loan, he is entitled to deduct income tax when he makes the payment of interest. If required to pay merely a certain sum at a certain date for interest, it is possible that he may not be entitled to deduct income tax, but the remedy will be to deduct the interest as an expense in making the income tax return. The distinction is that between annual interest and interest that is not annual interest.

NERVOUS RETENTION OF URINE.

MR. FRANK KIDD, F.R.C.S., writes: In answer to Dr. Harford Edwards's memorandum on this subject (BRITISH MEDICAL JOURNAL, January 13th, page 72), the following remarks may be of interest. In the *Zentralblatt für Chirurgie* (January 14th, 1911, page 36) an article by Otto Franck appeared on "Glyzerin als Blasenlaxans." He begins by noting the frequent recurrence of "nervous" retention of urine after operations, the consequent necessity for prolonged catheterization, and the great risks of cystitis and pyelitis thereby entailed. He then remarks that certain gynaecologists (Baisch, Döderlein, etc.,) conceived the idea of injecting 20 c.cm. of a 2 per cent. solution of boroglyceride into the bladder after a catheter had been passed and the bladder emptied, with the idea of preventing infection of the bladder. To their surprise they found that the glycerine induced "peristalsis" of the bladder and that hardly ever was a second catheter required. Franck states that he has employed the method in many cases, and without a single failure.

My first opportunity of putting the method to the test did not occur until August. I had operated on a highly-strung patient for double inguinal hernia, and this was followed by complete retention of urine. Having passed a cathether and emptied the bladder, I injected 20 c.cm. of 2 per cent. boroglyceride. This caused no pain or irritation, but in a few hours the patient emptied his bladder spontaneously, and continued to do so for the rest of the time he lay in bed. I have only had one opportunity of trying the method since, and in this case also it was successful. The 2 per cent. boroglyceride is used rather than pure glycerine because it is less irritating, and, in addition, is calculated to prevent infection. Twenty cubic centimetres will be found sufficient to produce the desired effect.

Believing this method to be a practical device of the greatest value to the practising physician, owing to the common occurrence of "nervous" retention of urine after operations and the difficulty in dealing with it, I intended to try it on a series of cases and publish the results. But Dr. Edwards's suggestion of a *rectal* injection of glycerine, if it will act in every case, seems to me to be an advance on the first method, as it does away with the risk of catheterization altogether.

I intend to try it at the London Hospital on a series of cases, reserving the bladder injection for any case in which it happened to fail, and hope to publish the results in a short paper at a later date.

LETTERS, NOTES, ETC.

CEREBRAL INFLUENZA.

MAJOR H. V. MCMAHON DILLON, R.A.M.C. (ret.), writes: In the issue of the BRITISH MEDICAL JOURNAL of January 13th, *re* "Cerebral Influenza," under the EPITOME OF CURRENT MEDICAL LITERATURE, two interesting cases were recorded (Stepp, *Wien. med. Klin.*, No. 34, 1911). I wish to invite reference to two cases somewhat similar recorded by me in the *Lancet* of November 20th, 1909, which may be of comparative interest though somewhat differing in respect of symptoms.

STERILIZING VACCINATON LANCETS.

DR. A. F. MEREDITH POWELL (Ramsgate) has had made for him by the Medical Supply Association an appliance which he finds very useful for sterilizing lancets when vaccinating at private houses and in making a rough test for albumen in urine. It consists of a metal lamp which fits exactly into a strong test tube; the latter in its turn fits into a round leather case, the whole outfit not occupying more room than a gravimeter. The lamp is so constructed that the contained fluid is unspillable.

THE ADMINISTRATION OF OXYGEN.

MR. WALTER CLIFFORD, Mines Rescue Instructor to the N. Staffs Colliery Owners' Association (Stoke-on-Trent), writes: I have read with interest the letters in your valuable JOURNAL *re* artificial respiration of the apparently drowned and the merits of the different methods. Also Mr. M. G. McElligott's experience with the oxygen apparatus at Howe Bridge Rescue Station (BRITISH MEDICAL JOURNAL, January 20th, p. 159), and I think my experiences would prove interesting, to your correspondents especially. I have been associated with the oxygen apparatus for use in mines from the very earliest types, and I can bear out in every particular Mr. McElligott's statements concerning the invigorating effect of the oxygen inhaled when wearing the apparatus. Every week I am training sixty men in the use of the oxygen apparatus, and also the rudiments of first aid, and I invariably tell them to use the Silvester method if one of their number becomes unconscious whilst wearing the apparatus. The reason is this: in front of him the wearer carries an indiarubber bag, into which passes all the oxygen he has to breathe, before it reaches his mouth-piece. Obviously, then, if Schäfer's method were adopted, the bag would be pressed out flat under the wearer, and he would not be able to get any oxygen at all to breathe. Another thing is that if Silvester's method be adopted, the oxygen cylinders on his back serve for packing, and support his back a little. The by-pass valve could be opened, so that he would be able to get a plentiful supply of oxygen all the time, whilst, at every exhalation, the release valve, which is situate on the top of the breathing-bag, could be opened, so that no effort to exhale would be needed. Indeed, by this method, the oxygen would be forced on the man's lungs, and, of course, with a little pressure on his ribs by the operator, and with the release valve open, it would be exhaled quite easily. I only recommend Silvester's method when the man is wearing the apparatus, when obviously Schäfer's would be impracticable. But in ordinary cases of unconsciousness through suffocation, I would advise Schäfer's method, as I have found it to be the most reliable.

BREAD IN CHILDHOOD.

MR. THOMAS G. READ, L.D.S.R.C.S.Eng. (Blackgang, Isle of Wight) writes: If instead of tabooing the consumption of sweets in childhood care was taken that children were not supplied with bread that rapidly forms lactic acid during mastication, little would be heard in the future of dental caries during childhood. The extreme outer coating of enamel covering the crown of a tooth is most resistant to acids likely to be introduced into the mouth, but the most perfect teeth must decay sooner or later if lactic acid is frequently formed in the mouth during eating, as lactic acid during its nascent state has such a powerful decomposive action on tooth tissue. To cleanse the teeth after meals, when food that forms lactic acid during mastication has been eaten, will not prevent the damage done during eating. Were medical officers of health to test breads for acid before and after mastication, it would soon be well known that most modern and much standard breads rapidly form lactic acid during mastication. The breads that form lactic acid during eating are those made from flours that have had the ferments of the wheat either destroyed or removed during milling. When the unimpaired ferments of the wheat are present in the flours, the breads produced do not form acid during mastication.

MORPHINE POISONING IN INFANTS.

DR. D. M. MACDONALD, (Leven, Fife) writes: The susceptibility of infants to opium and its preparations is generally accepted. On January 2nd I saw an infant of four months, who four hours previous to my visit had had administered a morphine suppository ¼ grain, given by mistake for a glycerine one. The child was in complete stupor, with contracted pupils. Irrigation of the bowel with Condy's fluid was carried out, though it is questionable if it was of any good, also the routine stimulation to the skin. The suppository was given at 4 p.m., and by 6 a.m. the following morning the infant was quite lively. I should be glad to know of any similar experience, and whether it is likely that it would have made any difference had the fourth grain of morphine been given instead by the stomach.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.